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INDEX TO VOLUME XIV.

CONTRIBUTORS.

A

Abell, Irvin, 158, 180, 341, 602.
 Adair, J. M., 659.
 Adams, J. F., 273.
 Adams, R. C., 595.
 Allen, F. S., 327.
 Allen, J. D., 324.
 Allen, M. S., 554.
 Allen, W. E., 232.
 Alvey, W. F., 166, 230, 442.
 Anderson, J. L., 98.
 Anderson, W. W., 60.
 Askenstedt, F. C., 62, 366.
 Ashbrook, W. A., 638.
 Asman, Bernard, 42, 248, 555, 654.
 Atkinson, J. L., 101.
 Aud. Guy, 165, 166, 204, 239.
 Aud. C. Z., 164, 391, 442.
 Austin, Curtis, 232.

B

Baldauf, Leon, 386.
 Barbours, P. F., 359, 478.
 Barkley, A. H., 37, 44, 388, 625
 Bassett, F. H., 516.
 Bay, T. T., 604.
 Beazley, H. C., 287, 610.
 Beck, Chas. K., 484.
 Bertram, H. M., 230.
 Blackburn, J. H., 508.
 Bloch, O. E., 361.
 Bloom, I. N., 63, 68
 Blythe, Vernon, 85.
 Boggess, W. F., 71, 847, 586.
 Bolling, W. A., 392.
 Botts, A. T., 50.
 Botts, J. W., 603.
 Brady, A. S., 223, 275, 651.
 Britt, W. F., 601.
 Brock, O. D., 161.
 Brock, G. S., 626.
 Bronner, Herbert, 150, 568.
 Brooks, John G., 103, 297.
 Brown, E. M., 532.
 Brown, O. W., 213
 Buchanan, J. B., 101.
 Buckner, F. L., 101.
 Bullock, W. O., 100, 288.
 Burnett, E. D., 227.
 Burton, F. R., 269.

C

Cain, A. W., 230, 231, 553, 621.
 Cain, C. E., 102.
 Caldwell, J. H., 232, 279, 442.
 Carpenter, J. G., 26, 39, 418.
 Carroll, C. C., 160
 Carroll, F. G., 441.
 Carr, W. H., 390.
 Carson, J. O., 506.
 Catfer, J. L., 448.
 Cash, W. L., 98.
 Casper, M., 31, 429, 314, 317.
 Center, G. M., 103.
 Chance, H. C., 191.
 Chestnut, Lee, 102.
 Childers, W. J., 441.
 Chrisman, J. H., 603.
 Clayton, C. F., 208.
 Cohn, S., 229, 627.
 Collette, W. T., 51.
 Comstock, J. E., 506.
 Cowan, George, 533.
 Cox, B. D., 103.
 Craig, J. E., 165.
 Craig, T. E., 391.
 Crenshaw, J. W., 162, 244, 342, 486.

D

Dabney, S. G., 233, 323.
 Dade, Randolph, 549.
 Daugherty, C. G., 100
 Davidson, W. L., 51.
 Davidson, A. J., 365.
 Davis, L. H., 514
 Davis, R. H., 380.
 Day, G. H., 143, 233, 335, 336.
 Dixon, Arch, 101
 Donaldson, Allen, 390.
 Dowden, C. W., 81.
 Doyle, G. F., 288.
 Drake, W. P., 508, 627, 659.
 Dugan, W. C., 248, 314, 336.
 Dunn, J. F., 217, 602.
 Dunn, J. L., 228, 229.

E

Eckler, C. M., 99.
 Eckler, L. T., 232, 266.
 Edwards, J. P., 273.
 Elmore, E. E., 384.
 English, J. M., 554, 658.
 Erskiletian, D. H., 507

F

Farbach, H. J., 333.
 Farmer, Chas., 391.
 Filiatreau, R. N., 289, 336.
 Fitzpatrick, H. W., 102.
 Flannagan, W. D. G., 507.
 Foley, J. G., 156.
 Forcht, Fred, 527.
 Forsee, C. G., 248.
 Foster, J. C. B., 603.
 Fort, F. T., 190, 254.
 Fox, J. E., 229.
 Frank, Louis, 43, 336, 634, 642.
 Frankel, S. C., 323
 Franz, J. A., 230.
 Frazer, T. A., 229, 634.
 Freeman, J. K., 334.
 Fultz, H. M., 604.

G

Gaddie, D. W., 164, 165, 198, 342.
 Gambill, W. L., 24, 26, 492, 564.
 Garrett, N. M., 374.
 Gary, W. E., 7.
 Garrison, S. F., 255.
 Gerding, W. J., 58, 256, 259
 Gibson, T. T., 224.
 Gilliam, H. A., 98, 222.
 Givens, L. S., 390.
 Glahn, Jacob, 85, 579.
 Goldsborough, C. N., 227.
 Gossett, W. B., 556.
 Gowdy, E. L., 165, 199.
 Graham, Cyrus, 41.
 Grant, H. H., 232, 314.
 Grant, E. O., 391
 Graves, W. H., 98.
 Greenwell, J. L., 289, 412.
 Green, Paul, 507.
 Griffin, Thos. R., 97.
 Gribble, Bert, 323.

H

Hall, G. C., 166, 289, 392, 407.
 Hall, E. N., 659.
 Hamilton, J. M., 218, 278.
 Hammond, L. D., 534, 553.
 Hancock, C. L., 226.
 Hancock, Jethra, 334.
 Hanes, G. S., 33, 253.
 Harbold, J. E. L., 226.
 Harned, J. W., 162, 228, 442, 625.
 Harris, C. H., 254, 334.
 Heath, C. L., 626.
 Heistand, C. V., 101.
 Heizer, W. L., 639, 646.
 Henderson, E. L., 164.
 Henry, H. R., 599.
 Hocker, H. T., 228, 229
 Hocker, R. T., 305, 602
 Hodge, J. A., 523.
 Hoffman, C. G., 568, 572.
 Hopper, J. H., 166.
 Hopkins, S. M., 594.
 Hoover, I. J., 289, 363.
 Horine, E. F., 602, 603, 650.
 Horton, W. A., 604.
 Howard, C. C., 50, 306.
 Howard, E. M., 99.
 Hume, I. W., 23, 536.
 Hunt, Emma, 229, 628
 Hurst, Taylor, 102.

I

Irvin, W. E., 193.

J

Jackson, E. W., 109, 186, 191.
 Jackson, W. Z., 228, 229, 310, 601, 624
 Jefferson, C. W., 328, 334.
 Jenkins, J. O., 182.
 Jessup, J. N., 609.
 Johnson, J. E., 399.
 Johnson, J. S., 601.
 Jones, W. H., 507.

K

Kahn, Lee, 354
 Kash, M. C., 301.
 Keith, D. Y., 317.

- Kelley, O. W., 248.
 Keys, B. B., 585.
 Kincaid, J. W., 68, 113, 191.
 Kinnaid, V. G., 625.
 Kincheloe, J. E., 97.
 Kinsolving, W. G., 391, 611.
 Kobert, C. B., 446, 553.
 Kohn, Aaron, 105.
 Koontz, F. L., 648.
- L
- Lackey, J. H., 450.
 Lambert, S., 289.
 Larue, F. G., 626.
 Layman, R. T., 165, 391, 554, 602.
 Lederman, I. A., 416.
 Levi, W. D., 414.
 Lignon, Peyton, 100.
 Linn, H. P., 350.
 Lock, J. S., 624.
 Logan, J. M., 351.
 Logan, G. W., 287.
 Long, W. H., 7, 14, 18.
 Lovell, A. G., 102.
 Lucas, C. G., 233.
 Lukins, J. B., 311, 315.
 Lutz, J. S., 165, 587.
 Lyon, Howard, 288.
- M
- Marion, J. W., 517.
 Marshall, J. T., 228, 229, 309, 602.
 Martin, W. M., 99.
 Mathews, J. M., 40.
 Maus, Col. L. M., 288.
 McBee, K. S., 603.
 McChord, R. C., 165, 391, 553, 621.
 McClymonds, J. T., 27.
 McClure, Charles, 658.
 McClure, W. B., 619.
 McCormack, A. T., 67, 477, 508, 603.
 McCormack, J. N., 106, 236, 294, 298, 446.
 McKenna, H. J., 155, 543, 602.
 McKenney, W. A., 231, 442.
 McKinley, D. H., 625.
 McMurtry, L. S., 110.
 Meadows, M. W., 99, 230.
 Meeks, J. R., 442.
 Meyers, S. J., 617.
 Mobley, J. C., 659.
 Mobley, W. L., 164.
 Molloy, L. P., 350.
 Moore, N. W., 390.
 Moore, W. B., 100, 391.
 Moorman, Earl, 228.
 Moren, J. J., 158, 247, 527.
 Morrison, J. R., 76, 158, 189, 248.
 Morris, Everett, 242.
 Morris, H. T., 230.
 Morris, J. M., 373.
 Morton, W. W., 276.
 Mosby, W. L., 98, 99, 229.
 Mosby, W. R., 602.
 Moss, C. A., 103.
 Moss, W. R., 625.
 Mulvey, T. H., 493.
 Murphy, J. B., 21, 113, 558.
- N
- Nickell, A. W., 248.
 Nickell, G. C., 350.
 Norfleet, Carl, 231, 232, 627, 652.
 North, Edward, 263.
 Nuchols, O. P., 97.
- O
- O'Connor, B. J., 165, 334.
 O'Connor, J. W., 554, 658.
 O'Roark, G. B., 98, 604.
 Orsborn, H. K., 289, 359.
 Overby, Bob, 195.
 Owen, Walker, 102.
- P
- Parks, S. P., 97.
 Parker, S. F., 232.
 Payne, G. W., 98, 219.
 Percefull, A. O. L., 249, 254, 392.
 Pungst, A. O., 166, 323, 406, 417, 538, 554.
 Phillips, T. L., 632.
 Pirrung, J. Edward, 554.
 Pope, Curran, 67, 164, 189, 253, 333, 343, 348, 390, 391, 392, 572.
 President, 618, 619, 621, 622, 623, 626, 632, 633, 637, 640, 645.
 Prewitt, J. V., 658.
 Price, J. W., 45, 392, 439.
 Price, W. M., 230.
 Purdy, George, 554.
- R
- Rathburn, J. I., 229.
 Ratterman, F. L., 442.
 Rau, E., 465.
 Ravitch, M. L., 108, 178, 238, 296, 358, 407, 453, 459, 576, 608.
 Ray, J. M., 349.
 Reddick, J. T., 546, 626, 647.
- S
- Rees, J. M., 230.
 Richmond, W. W., 620.
 Rice, J. H., 287, 442.
 Riley, Edgar, 288.
 Rivers, B. P., 378.
 Rivers, Horace, 618.
 Robertson, D. S., 98.
 Robertson, L. L., 99.
 Roberts, W. O., 349.
 Robinson, S. B., 390.
 Rodman, H. D., 289.
 Rodman, W. L., 171.
 Rodman, J. J., 99, 289, 632.
 Rogers, C. W., 164, 442.
 Rosenham, C. J., 320, 324.
 Rubel, H. M., 246.
- S
- Salen, W. B., 303.
 Samuel, J. H., 102.
 Sanders, E. M., 51.
 Sanders, W. M., 318.
 Sandbach, W. S., 287, 616.
 Sargent, A., 162.
 Scholes, C. E., 397.
 Scholl, J. B., 553.
 Schroeder, R. L., 590.
 Secretary, 617, 618, 620, 621, 622, 624, 625, 626, 627, 630, 631, 638, 640, 644, 646.
 Sherrill, J. Garland, 22, 40, 619, 626, 635, 636, 637.
 Sherman, C. L., 391, 437.
 Shirley, I. A., 288, 599, 623, 639.
 Sights, H. P., 507.
 Sievers, R. C., 102.
 Simmons, W. R., 295.
 Sisk, A. O., 100.
 Simpson, V. E., 248, 385.
 Singleton, J. W., 523.
 Skinkle, C. E., 554.
 Smith, S. C., 229.
 Snowden, J. A., 599.
 Solomon, Leon L., 80, 196, 348.
 South, L. H., 478.
 Spalding, C. B., 165, 166, 336, 390, 425, 480.
 Speidel, Edward, 17, 135.
 Spicer, W. W., 603.
 Steinburg, S. A., 108, 178, 238, 296, 358, 453, 559, 576, 608.
 Stephens, W. C., 102.
 Stevens, E. A., 560, 625.
 Stewart, P. H., 43, 189.
 Stewart, J. M., 402.
 Stites, F. M., 51, 228, 442.
 Stone, J. W., 101, 630, 632, 634, 639.
 Stone, T. W., 503.
 Stovall, J. W., 604.
 Strickler, F. P., 554.
- T
- Taneyhill, G. L., 176.
 Taylor, B. M., 165, 215.
 Taylor, W. L., 4.
 Taylor, J. M., 287, 442, 507.
 Taylor, Morgan, 593.
 Thompson, A. L., 69.
 Thompson, W. R., 304.
 Thornton, G. G., 432.
 Threlkeld, A. E., 194.
 Tileston, H. B., 382.
 Todd, Chas. H., 606, 613, 645.
 Townsend, T. J., 588.
 Trabue, L. P., 103.
 Travis, D. J., 350.
 Turner, E. D., 601.
- U
- Underwood, T. C., 609.
 Usher, H. V., 601.
- V
- Vance, Ap. Morgan, 171.
 Vance, Charles A., 225, 583.
 VanArsdall, C. B., 164.
 Venable, O. R., 288.
 Vidt, C. T., 99, 210, 229.
- W
- Walters, W. J., 102.
 Washburn, I. L., 627.
 Wathen, J. R., 18, 254, 315, 317, 541, 555, 602.
 Wells, J. E., 230, 390, 622.
 Weidner, Carl, 348.
 Wendell, J. T., 555.
 White, J. B., 601.
 Willmoth, A. D., 164, 165, 190, 253, 314, 317, 390, 554, 555, 602.
 Wilson, John E., 212, 499.
 Wood, R. W., 230.
 Woodburn, Clarence, 164.
 Woodbury, C. O., 446.
 Woodard, R. L., 507, 511, 614.
 Wright, O. E., 287.
- Y
- Young, J. F., 603.

ORIGINAL ARTICLES.

A

- Abscess of Mesentery with Gangrene of Small Intestine, 326.
 Abdominal Pain, 359.
 Ahont Discord Still Existing in Some Counties, 291.
 Acidosis, Its Determination, Significance and Treatment, 650.
 Acute Bright's Disease, 594.
 Acute Articular Rheumatism in Children, 275.
 Acute Septic Peritonitis, 279.
 Acute Suppurative Cholecystitis Complicated by Typhoid Fever, 45.
 Active and Passive Immunization, The Essential Difference Between Vaccine and Serum Therapy, 324.
 Address, President's to Carlisle County Medical Society, 222.
 Address of President of Pendleton County Medical Society, 212.
 Address of Welcome, by T. C. Underwood, 609.
 Address of Welcome, by H. C. Beazley, 610.
 After Effects of Diphtheria on the Eye, Ear, Nose and Throat, 407.
 All-Time Health Officers Bill, 57, 105.
 American First Aid Conference, 106.
 Anaphylaxis, 304.
 Analysis of the Anaphylactic Reaction, 385.
 Anuria, 373.
 Annual Meeting of A. M. A., 294.
 Annual Meeting, 447.
 Annoying Laboratory Experiences, 401.
 Anesthesia, Local, 204, 536.
 An Appreciation of Mr. Kohn, 115.
 Appendicitis, 219.
 Army Rejections, 451.
 Asthma, 218.
 Auditor's Report, 465.

B

- Bacillus Aerogenes Capsulatus Infection with Recovery, 335.
 Backache, 255.
 Bill to Prevent Buying and Selling of Patients by Physicians, 57.
 Bill to Prevent Division of Fees, 59.
 Birth Registration 173.

BOOK REVIEWS:

- Anoci Association, 167.
 Art of Anesthesia, 444.
 Bases of Symptoms, 555.
 Bone Graft Surgery, 234.
 Clinics of John B. Murphy, 555, 167, 168.
 Colon Hygiene, 233.
 Diseases of the Eye, 600.
 Diseases of the Nose and Throat, 56.
 Diseases of the Kidney and Urinary Bladder, 168.
 Endemic Diseases of Southern States, 289.
 General Medicine, Practical Medical Series, 234.
 Gynecology, 56, 400.
 Infant Feeding and Allied Topics, 354.
 International Clinic, 56, 233, 555.
 Kinetic Drive, Its Phenomena and Control, 44.
 Materia Medica and Prescription Writing, 56.
 Mayo Clinic, Papers Collected 1915, 600.
 Medical Clinic of Chicago, 56, 233, 290, 555, 662.
 Medical and Veterinary Entomology, 234.
 Nervous and Mental Diseases, 234.
 Nitro by Hypo, 168.
 New and Non-Official Remedies, 354.
 Obstetrics, Vol. VII, Practical Medical Series, 233.
 Obstetrics, Normal and Operative, 555.
 Ophthalmoscopic Diagnosis, 168.
 Painless Child Labor, 168.
 Physics and Chemistry for Nurses, 600.
 Physicians Visiting List, 233.
 Pellagra, 400.
 Postmortem Examinations, 233.
 Practical Cystoscopy, 168.
 Principles and Practice of Obstetrics, 56.
 Practice of Pediatrics, 167.
 Practical Medical Series, 556.
 Sanders Catalogue, 104.
 Sexual Impotence, 234.
 Skin and Venereal Diseases, 233.
 Social Travesties, What They Cost, 444.
 Surgical Operations with Local Anesthesia, 168.
 Surgical and Gynecological Nursing, 600.
 Starvation Treatment of Diabetes, 56.
 Studies in Ethics for Nurses, 289.
 Syphilis As a Modern Problem, 56.
 Synopsis of Medical Treatment, 56.
 Text Book on Military Hygiene and Sanitation, 167.
 Text Book on Pathology, 56.
 Text Book on Pathogenic Bacteria and Protozoa, 239.
 Treatise on Fractures, 444.
 Your Baby, 168, 445.

- Bone, Metastatic Infection of, 480.
 Breast Tumors, 311.
 Breeding Flies, 607.
 Bright's Disease, Acute, 594.
 Business Manager's Report, 477.
 Business, 448.

C

- Cardui Trial, 356, 449.
 Carrels' Solution, 606.
 Care and Comfort of the Surgical Patient, 249.
 Case of Bacillus Aerogenes Capsulatus Infection with Recovery, 335.
 Carcinomata of the Breast with Metastasis of the Liver, 365.
 Carbuncle, Treatment of, 342.
 Cases of Insanity Selected from a Long and Busy Practice, 486.
 Catarrh, Gastro-Intestinal, 549.
 Camp Sanitation, 595.
 Cholecystitis, Acute Suppurative, Complicated by Typhoid Fever, 45.
 Christian County and Hopkinsville, 511.
 Chronic Prostatitis, 150.
 Chronic Hypertension, 194.
 Commercial Exhibit, 449, 525.
 Complications and Sequela of Influenza, 310.
 Colds, Their Significance and Treatment, 220.
 Colles' Fracture, 91.
 Conference of City and County Health Officers, 1.
 Concerning Dental Mal-Occlusion, 382.
 Condition for Which Hippocrates Bled, 276.
 Contagion and How To Combat It, 342.
 Constitution and By-Laws, 456.
 County Obstetrics, 336.
 County Officers, 605.
 County Members Falling Down, 40.
 Courteous Physician, 303.
 Crime as a Disease, 488.

D

- Definite Death Certificate, 58.
 Dermatology and Syphilis at the Detroit Session, 406.
 Detail Men, 605.
 Dextrin Maltose, 170.
 Diagnosis and Medical Treatment of Gastric and Duodenal Ulcers, 27.
 Diagnostic Significance of Pain in the Chest, 191.
 Diarrhea, Summer, 584.
 Difficult Presentations, 135.
 Digitalis, Its Indications and Use, 60.
 Differential Diagnosis Between Chronic Cholecystitis, Duodenal Ulcer and Simulating Neuroses, 429.
 Diphtheria, Modern Treatment of, 412.
 Diphtheria, After Effects on the Eye Ear, Nose and Throat, 407.
 Discussions, 448.
 Doctor Considered as a Business Man, 533.
 Dope Dispensing Doctors, 2, 172.
 Do You Want Anything, 58.
 Dr. Stuart Exonerated, 402.
 Dr. Taneyhill, 176.
 Duodenal Ulcer, 587.

E

- Early Symptoms of Tuberculosis, 215.
 Eclampsia of Pregnancy, 547.
 Eclampsia, Puerperal, 32.
 Eczema, Relationship of Feeding in Infantile, 576.
 EDITORIALS:

- About the Discord Still Existing in Some County Societies, 291.
 An Innovation, 607.
 Annual A. M. A. Meeting, 294.
 Annual Meeting, 447.
 Annoying Laboratory Experiences, 401.
 Army Rejections, 451.
 At Hopkinsville, 557.
 All-Time Health Officers Bill, 57.
 Appreciation of Mr. Kohn, 105.
 Bill to Prevent Buying and Selling of Patients by Physicians, 57.
 Birth Registrations, 173.
 Breeding Flies, 607.
 Cardui Trial, 356, 449.
 Carrel Solution, 606.
 Conference of City and County Health Officers, 1.
 Commercial Exhibit, 449.
 County Members Falling Down, 401.
 County Officers, 605.
 Dope Dispensing Doctors, 2, 172.
 Definite Death Certificates, 58.
 Detail Men, 605.
 Dextrin Maltose, 170.
 Doctor R. N. Simmons, 295.
 Doctor Churchill, 170.
 Doctor W. L. Rodman, 171.
 Doctor Ap. Morgan Vance, 171.
 Doctor Vernon Robbins, 510.
 Doctor Von Emdorf, 510.
 Doctor John B. Murphy, 558.
 Doctor J. H. Lackey, 450.
 Doctor U. L. Taylor, 4.
 Doctor Charles H. Todd, 606.
 Discussions, 448.
 Do You Want Anything, 58.
 Exterminate the Rat, 2.
 Forty Years Ago, 509.
 Hopkinsville Meeting, 401.
 Index, 605.

Infantile Paralysis, 403.
 Ill Effects of Out Door Sleeping, 5.
 Kentucky's Advanced Legislation, 355.
 Law About Sore Eyes in Babies, 5.
 May We Count on Your Assistance, 6.
 Malaria, 2, 106.
 Medical Dictionary, 6.
 Manual for Health Officers 402.
 Medical Authorities and Viburnum Prunifolium, 294.
 New Legislation, 235.
 New Year, 1.
 Optometry Bill, 57.
 Our Advertisers, 448.
 Patent Medicines, 3.
 Poisonous Fly Paper, 57.
 Proceedings of Scientific Session and House of Delegates, 605.
 Proprietary Medicines, 172.
 Program, 291.
 Read all the JOURNAL, 606.
 Railroad Rates for the Hopkinsville Meeting, 447.
 Resignation of Prof. R. M. Allen, 236.
 Send for Containers, 175.
 Suggestion, 106.
 United We Stand, Divided We Fall, 58.
 Vital Statistics for 1915, 169.
 Why I Do Not Attend Society Meetings, 175.
 What We Owe Dr. Milton Board, 236.
 Your Dues, 170.

Eighth Annual Report of Medico-Legal Committee, 526.
 Emergency Cases Seen in the Eye and Ear Practice, 538.
 Empyema, 478.
 Endometritis in the Virgin, 182.
 Excision and Immediate Closure Operation for Rectal Fistula, 654.
 Exhibits "A" to "I", 465.
 Expectorants, Mode of Action and Symptomatic Indications, 652.
 Exterminate the Rat, 2.
 Eye Strain, 273.

F

Fee Splitting, Severe Penalty for, 239.
 Forty Years Ago, 509.
 Forum, 233, 286, 349, 393, 445, 556, 602, 662.
 Fractures, 113.
 Fractures, Colles', 11.
 Functional Heart Diseases, What Are They, How Treated, 585.
 Future of Medical Profession in Kentucky, 560.
 Further Modification of Ferguson's Operation for Excision of Upper Jaw, 439.

G

Gall Bladder Surgery, Some Observations On, 541.
 Gastric and Duodenal Ulcers, 31.
 Gastro-Intestinal Catarrh, 549.
 General Plan for a Schedule of Medical Fees, 289.
 Glaucoma, Pathology of, 414.
 Glaucoma, Medical Treatment of, 416.
 Goiter, Present Status of Surgical Treatment, 18.

H

Headache As a Diagnostic Symptom, 269.
 Heart Diseases, Functional, How To Treat and What Are They, 585.
 Heart, Syphilis of, 76.
 Heart Complications in Acute Infectious Diseases, 69.
 Hematuria, Symptomless, 543.
 Hemophilia, Report of a Case, 246.
 Hernia, Inguinal, 590.
 Hopkinsville Meeting, 401, 509, 557.
 Hopkinsville, 557.
 Hypertension, Chronic, 194.

I

Ill Effects of Out Door Sleeping, 5.
 Immunization, Active and Passive, Essential Difference Between Vaccine and Serum Therapy, 324.
 Importance of Posture in Examination, Operation and Treatment of Rectal Lesions, 33.
 Index, 664.
 Influenza, Complications and Sequela, 310.
 Infantile Paralysis, 403.
 Inguinal Hernia, 590.
 Innovation, 607.
 Injury to Intestine Followed by Volvulus, 225.
 Intravenous Use of Radium in High Blood Pressure, 384.
 Intensive treatment of Syphilis, 63.
 Intussusception In Infants, 110.
 Intussusception in Adults; Report of Case, 492.
 Invocation, 609.
 Iodine, Use of, and the Iodides in Medicine, 186.

J

Jaw, Surgical Infections of, 425.

K

Kentucky's Advanced Legislation, 355.
 Kidney, Commoner Diseases of, 259.
 Kidney, Some Tuberculous Infections of, 568.

Lackey, J. H., 450.
 Labor, Normal, 274.
 Law About Sore Eyes in Babies, 5.
 Lesions of the Right Iliac Fossa Other Than Appendicitis, 213.
 Lessons and Observations of the Medico-Legal Committee, 256.
 Lights and Shadows, 593.
 Lincoln, Abraham, 572.
 Local Anesthesia, 204, 536.

M

Malpractice Suits After One Year, 239.
 Manual for Health Officers, 402.
 Management of Normal Labor, 374.
 Management of the Newly Born, 199.
 May We Count On Your Assistance, 6.
 Medical Inspection of Schools, 263.
 Medical Inspection of School Children, 320.
 Medical Treatment of Glaucoma, 416.
 Medico-Legal Committee, Eighth Annual Report of, 526.
 Medico-Legal Committee, Lessons and Observations of, 527.
 Medical Dictionary, 6.
 Medical Authorities and Viburnum Prunifolium, 294.
 MEMORIAM, IN:
 John G. Brooks, 103, 897.
 Joshua T. Wesley, 556.
 J. E. Johnson, 397.
 Scholes, C. E., 397.
 Yelton, W. H., 290.

Metastatic Infection of Bone, 480.
 Minutes of Proceedings of Twenty-fifth Annual Session, Held at Hopkinsville, April 1876, 513.
 Minutes of the Sixty-sixth Annual Meeting, 609.
 Modern Treatment of Diphtheria, 412.
 Monstrosities and Congenital Deformities, 484.
 Murphy, J. B., 558.

N

News Items and Comments, 52, 92, 157, 226, 281, 351, 393, 443, 500, 552, 596, 660.
 New Model Advertising Law, 239.
 New Pure Food Law, 239.
 New Year, 1.
 New Legislation, 236.
 Nitrous Oxide Oxygen Anesthesia, 14.
 No Malpractice Suits After One Year, 239.
 Normal Puerperal State, 217.
 Non-Tuberculous Infections of the Kidney, 568.
 Nuclein, 318.

O

Obstetrics, Country, 336.
 Obstetric Forceps, Some of the Uses of, 363.
 Official Call, 454.
 OFFICIAL ANNOUNCEMENTS:
 Bill to Prevent Division of Fees, 59.
 Constitution and By-Laws, 456.
 Christian County and Hopkinsville, 511.
 Commercial Exhibit, 525.
 Eighth Annual Report, Medico-Legal Committee, 526.
 Minutes of the Twenty-fifth Annual Session Held in Hopkinsville, April, 1876, 513.
 Kentucky State Medical Association—Official Minutes of the Sixty-sixth Annual Meeting, 609.
 Official Minutes of the House of Delegates of the Sixty-sixth Annual Meeting, 616.
 New Model Advertising Law, 239.
 New Pure Food Law, 239.
 No Malpractice Suits After One Year, 239.
 Program, 297, 453, 510.
 REPORT OF:
 Auditor, 465.
 Council, 462.
 Business Manager, 477.
 Secretary, 474.

Severe Penalty for Fee Splitting, 239.
 Vital Statistics Report for 1915, 178.

Optometry Bill, 57.
 Ophthalmia Neonatorum and Trachoma, 418.
 Operations of Choice, 417.
 Oration in Medicine, 560.
 Oration in Surgery, 564.
 Other Fellows Mistakes, 432.
 Our State Officers, 557.

P

Patent Medicines, 3.
 Pain, Abdominal, 361.
 Pathology of Glaucoma, 414.
 Perforation of Gastric and Duodenal Ulcers, 180.
 Pituitrin, Use in Medical and Surgical Practice, 189.
 Plea for More Conservative Surgery in the Female Genital Organs, 37.
 Plea for a Better Diagnosis, 437.
 Pneumonia, 85.
 Poisonous Fly Paper, 57.
 Post Operative Ileus, 338.
 Pregnancy, Eclampsia of, 547.
 Preparedness, 358.
 Present Status of the Diagnosis and Treatment of Gastric and Duodenal Ulcers, 315.

President's Address to Carlisle County Medical Society, 222.
 Present Status of the Surgical Treatment of Goiter, 18.
 Presentations, Difficult, 135.
 Proceedings of Scientific Session and House of Delegates, 605.
 Program, 291, 297, 453, 510.
 Proprietary Medicines, 172.
 Prostatitis, Chronic, 150.
 Public Health, 156.
 Puerperal State, Normal, 217.
 Puerperal Eclampsia, 82.
 Pyorrhea and Its Relation to Systemic Disturbances, 378.
 Purity in the Life and Language of the Physician, 244.

Radiography and Radiotherapy, 357.
 Radium, Intravenous Use in High Blood Pressure, 384.
 Railroad Rates to Hopkinsville, 447.
 Read All the JOURNAL, 606.
 Rectal Lesions, Importance of Posture in Examination, Operation and Treatment, 33.
 Relationship of Feeding in Infants, to Eczema, 576.
 Remote Infections Which Have Their Origin in the Mouth, 380.

Remarks on Treatment of Syphilis, 328.

REPORT OF:

Auditor, 465.
 Council, 462.
 Business Manager, 477.
 Medico-Legal Committee, 526.
 Secretary, 474.
 Report of Councilor of First District, 620.
 Report of Councilor of Sixth District, 621.
 Report of Councilor of Seventh District, 621.
 Report of Councilor of Eighth District, 622.
 Report of Councilor of Ninth District, 641.
 Report of Councilor of Tenth District, 623.
 Report of Councilor of Eleventh District, 624.
 Report of Delegates by Counties, 624-630.
 Report of Committee on Medical Preparedness, 635.
 Report of Committee on Legislation and Public Policy, 640.
 Report of Committee on Public Health, 644.
 Report of Committee on Medical Ethics, 645.
 Report of Committee on Tuberculosis, 645.
 Report of Louisville Vice Commission, 493.
 Report of Carcinomata of the Breast with Metastases to the Liver, 365.
 Resection of Stomach for Calloused Saddle Ulcer of the Lesser Curvature, 365.
 Resignation of Prof. R. M. Allen, 236.
 Response to Address of Welcome, 611.
 Review of Conditions Resulting from Cardio-Vascular Disturbances With or Without Organic Changes of the Heart and Vessels, 71.
 Rheumatism Acute Articular, 275.
 Rhinitis, Acute, 273.
 Roentgenology, 133.
 Roads, Their Diseases and Treatment, 224.

SCIENTIFIC EDITORIALS:

Bacteria and Pyuria in Skin Diseases, 451.
 Dandruff and Falling Out of Hair, 237.
 Fuss and Feathers in Anesthesia, 6.
 Dermatology and Syphilis at Detroit Session, 406.
 Organotherapy, 108.
 Physiotherapy in Skin Diseases and Syphilis, 176.
 Preparedness, 358.
 Radiography and Radiotherapy, 357.
 Raynaud's Disease and Syphilis, 295.
 Spider Bites, 559.
 Treatment of Dermatoses Due to Nephritis, 607.
 What Detects Malignancy in Epitheliomas, 107.
 The 1916 Meeting of A. M. A., 405.
 Secretary's Report, 474.
 Septic Peritonitis, 279.
 Send for Containers, 173.
 Severe Penalty for Fee Splitting, 229.
 Skull and Brain Injuries from Surgical Point of View, 210.
 Some Observations with Local Anesthesia, 306.
 Some of the Uses and Abuses of Obstetric Forceps, 363.
 Some Cardio-Vascular Stimulants and Their Uses, 366.
 Spider Bites, 559.
 Splenomegaly of Inherited Syphilis, 583.
 Study of the Secretions of the Mammal, A Factor in the Cause of Eclampsia, 7.
 Surgery of the Infected Hand, 24.
 Surgery in the Country, 195.
 Surgery in the Mountains of Kentucky, 301.
 Surgical Infection of the Jaw, 425.
 Syphilis, Intensive Treatment of, 63.
 Syphilis of the Heart, 76.
 Syphilis, Remarks on Treatment, with Report of Cases, 328.
 Symptomless Hematuria, 543.
 Summer Diarrhea, 584.

Then and Now in Surgery, 564.
 Therapeutic Measures Other Than Drugs, 343.
 Trachoma and Ophthalmia Neonatorum, 418.
 Treatment of Influenza, 310.
 Treatment of Dermatoses Due to Nephritis, 607.
 Treatment of Tuberculosis, 583.
 Treatment of Carbuncle, 342.

Tuberculosis, Early Symptoms of, 215.
 Tuberculosis, Modern Medical and Surgical Treatment of, 242.
 Tumors, Breast, 311.
 Twilight Sleep, 499.

U

Ulcers, Gastric and Duodenal, 31.
 Ulcers, Gastric and Duodenal, Perforation of, 180.
 Ulcers, Gastric and Duodenal, Present Status of, Diagnosis and Surgical Treatment, 315.
 Ulcer, Duodenal, 587.
 United We Stand, Divided We Fall, 58.
 Urinalysis in Life Insurance, 266.
 Uremia, 359.
 Use of Iodine and Iodides in Medicine, 186.
 Use of Pituitrin in Medical and Surgical Practice, 198.
 Usefulness of the X-ray and High Frequency Current in the Treatment of Skin Lesions, Especially with Reference to Cancer, with Report of Cases, 88.

V

Vaccines and Scrums, 208.
 Verumontanum with Reference to Referred Symptoms, 143.
 Vital Statistics for 1915, 169, 178.
 Volvulus, Injury to Intestine Followed by, 225.
 Von Ezdorf, Dr., 510.

W

What the Physician Owes the Public, 256.
 What We Owe Dr. Milton Board, 236.
 Why a Medical Society, 534.
 Why I Do Not Attend Society Meetings, 175.

Y

Your Dues, 170.

COUNTY SOCIETIES:

Barren, 50, 287, 441, 506.
 Bell, 97.
 Boyle, 97, 441.
 Breathitt, 228.
 Breckenridge, 97.
 Caldwell, 98.
 Calloway, 98.
 Carroll, 395.
 Carlisle, 98, 228.
 Carter, 98.
 Christian, 50, 162, 228, 287, 442, 507.
 Clay, 97.
 Clark, 51, 288.
 Crittenden, 229.
 Daviess, 99, 288.
 Eagle Valley, 554.
 Fayette, 99.
 Fulton, 229.
 Grant, 99.
 Greenup, 99, 229, 230.
 Hardin, 230, 442, 553, 658.
 Harlan, 99.
 Harrison, 100, 230, 390, 391.
 Henderson, 99, 100.
 Hopkins, 100.
 Jefferson, 101, 162.
 Laurel, 101.
 Lewis, 230.
 Lyon, 239, 350, 391.
 Mason, 102.
 McCreary, 101.
 Mercer, 164.
 Muhlenberg, 164.
 Muldraugh Hill, 166.
 Nelson, 289.
 Pendleton, 231, 232, 442.
 Pike, 102.
 Pulaski, 230, 231, 232.
 Rockcastle, 102.
 Rowan, 350.
 Russell, 507, 553.
 Shelby, 232.
 Todd, 102.
 Warren, 508, 659.
 Washington, 166.
 Whitley, 103.
 Wolfe, 103.

Tubercle Bacilli in Heart Clots in Miliary Tuberculosis.—A case of primary tuberculosis of the cervical lymph nodes and a widely disseminated miliary tuberculosis (skin, endocardium) was examined by Dieterle. The case was one of chronic lymphatic myelogenous leukemia with secondary tuberculosis. Four tubercle bacilli to sixty slides, or 1 to 15, were found in the venous blood of the right heart.

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EDITORIAL.

A NEW YEAR.

A full New Year of golden opportunities is before us. With the tolling of the bells which ushers it in, we naturally start with renewed resolutions in the battle of life.

First, let us be better diagnosticians. Let's not be negligent or slothful in our work. Let's carefully examine each patient, and in so far as it is possible, let's decide what is the matter and then fit our remedial agents to the actual condition which confronts us. Let's cut out the proprietaries. Patent medicines are not a bit worse. It is an insult to a patient's intelligence to prescribe a remedy of whose composition and indications you have only the manufacturer's word. Use fewer drugs and use them more wisely.

Let us attend every meeting of our county society. Even the few who are so well qualified as to think they do not need it will find that they can gain much by sharing their knowledge with the less fortunate, and most of us, realizing that we do need to touch elbows with our fellow, will gladly attend these meetings because we know the good they do us. Instead of asking our county secretary to spend his good time, for which he receives no compensation, in hunting us up, let's mail him a check for our dues to-day. Then when one of us is on the program, let's be prepared and be prompt. It is not fair to ask our brother practitioners to come to a meeting to hear us carelessly discuss a subject about which we have not refreshed our minds and memory. It is easy to say that case reports are the best and most interesting, but it is well to remember that only those case reports are interesting to others in which we ourselves are properly prepared.

Let's us resolve to read the JOURNAL more carefully and discriminately: especially, let us resolve to support the advertisers who support it. Let us remember, for instance, that Saunders publishes the best books on practice-

ally every medical subject and let us, therefore, patronize Saunders when we need text books. Without financial support of our advertisers, naturally, they cannot continue their support of us. Let us beyond and above all things be better and cleaner men, broader, more patriotic citizens, better qualified and better practicing physicians.

THE CONFERENCE OF COUNTY AND CITY HEALTH OFFICERS.

Under the auspices of the State Board of Health, the Annual School or Conference of County and City Health Officers was held in Louisville, December 8, 9 and 10. In many ways, this was the most successful conference which has been held. Every contribution to the program pointed out more clearly the necessity for a whole time health officer in every county which can afford it, to devote his entire time to carrying to all the people the modern intensive methods for the prevention of disease. The discussion of malaria by Dr. W. S. Leathers, of the Mississippi State Board of Health, was so complete as to leave nothing to be added to it. Dr. Curry, our own State Sanitary Engineer, described the technical building of the Kentucky Sanitary Privy so perfectly and practically that everyone present felt that he knew exactly how to do the job. An interesting announcement was made by the State Board of Health that no physician would be considered as eligible for appointment on a local board of health unless he has a Kentucky Sanitary Privy at his home and office, unless he is located on a sanitary sewerage system.

Dr. South, our State Bacteriologist, made a most interesting illustrated talk on the use and abuse of the State Laboratory. She said that its chief abuse was the failure of any doctor in the State to use it whenever he needed laboratory assistance. She emphasized the importance of sending specimens into the laboratory in the special containers required by the federal law, which are furnished free by

the Board to any physician that asks for them.

The attendance at this meeting was larger than ever before. Every county health officer was present except a few detained by epidemics of diphtheria. All the city health officers except a few from third class cities were present.

THE DOPE DISPENSING DOCTOR.

During the recent Conference of County and City Health Officers in Louisville, a special meeting of the State Board of Health directed that every physician in the State be notified that any physician convicted in court of illegal traffic in narcotics will have his license to practice medicine revoked upon presentation of proof. This is a matter of great importance to the profession and to the people of Kentucky. Mr. Bloomfield, the very effective attorney of the State Board of Pharmacists, has well said that the traffic in narcotics has been transferred from the crooked druggist to the crooked doctor. The State Board of Health proposes to see that the crooked doctor is no longer permitted to practice this nefarious branch of the profession.

The *Courier-Journal* contains the following editorial in regard to the dope dispensing doctor, which will be read with interest and appreciation by every honest physician:

"Decision of the State Board of Health to bar from practice any physician in the State convicted in courts of illegal traffic in opiates deserves commendation. The phrase 'crooks in all trades,' applies to the medical profession as well as to any other and honest physicians welcome the State Board's announcement as much as does the public. Nothing but gain can accrue from the loss of physicians whose conscience can be quieted by an American eagle, stamped on coinage of the realm.

"The board's decision comes in good time. Enforcement of the Harrison narcotic law has put a check on the operations of crooked druggists who formerly reaped a golden harvest through sale of 'dope' to unfortunates addicted to the habit. Illegal traffic along wholesale lines no longer can be practiced by them without discovery by Federal authorities. The crooked druggist has stepped down and out and into his shoes has stepped the crooked physician.

"Persons addicted to the use of morphine, cocaine and other opiates make a beaten path to his door. For a specified fee, which varies according to the greed of the physician and the purse of the 'fiend' he will write for his patient a prescription for the drug. So wholesale became the operations of some physicians along this line that the Board of Health de-

cided it was high time to take action in the matter.

"At a meeting last week the board adopted resolutions providing that any physician convicted in court of selling or furnishing morphine, cocaine or other opiates to habitues in violation of the law shall have his right to practice medicine withdrawn. The board is given this power by a State statute. The secretary of the body is notifying every physician in the State of the board's action.

"Three physicians in the State, arrested recently for illegal traffic in opiates, have pleaded guilty, evidently expecting to be released after paying a small fine. The action of the board will make the crooked physician in the future think twice before he violates the law."

MALARIA.

It is of the utmost importance that we reconstruct our ideas of the management of many diseases in line with the results of modern investigation. For example let us consider malaria. In the first place there is a great deal more of this distinctly parasitic disease in Kentucky than we have thought. During the past wet summer it has increased ten fold over the previous year. It is a disease frequently unrecognized and more frequently diagnosed when it does not exist. In clear cases of chills and fever it is at times justifiable to administer quinine on a clinical diagnosis. But even in evident cases many mistakes could be avoided by making as a routine a blood smear on a glass slide, staining it according to well-known methods and examining it with a microscope for the *plasmodium malariae* before any quinine is given. If too busy or unaccustomed to such work, send such smear to the State Bacteriologist or other Laboratory and get an accurate diagnosis. Then administer treatment if malaria is present. Give ten grains of quinine every hour until three doses are taken each morning for four days. Afterwards give three ten grain doses of quinine every fourth day for six weeks. This will cure malaria in every acute case.

EXTERMINATE THE RATS.

Desha Breckinridge writes many good editorials in the *Lexington Herald* but the following is one of the best and is cordially commended to every useful citizen of Kentucky:

"The *Herald* is often pressed to give free advertising to various enterprises and commodities of different sorts. As a rule it refuses to give any such advertising except at regular advertising rates. In violation of that

rule, however, it publishes this morning the announcement of the Pasteur Laboratories' Rat Virus, in the hope that it may lead to the wise use of this virus throughout Central Kentucky, and may induce the readers of *The Herald* to inaugurate a campaign for the destruction of rats and mice.

"It would save an annual loss of five millions of dollars to the farmers and grain men of Kentucky to exterminate the rats. Through that increase in the annual income of the citizens of the State there would be an added wealth of practically a hundred million dollars to the resources of the State. If every farmer, every housekeeper, every grain dealer, every livery stable keeper in the State would use a bottle of this virus within the same week, or even the same month, there would be a most excellent chance of exterminating the rats.

"If there were sufficiently continuous use of the virus, and the rat-proofing of buildings in which grain is stored, and of all residences, it would not be long till in Kentucky the rat was an extinct creature, none appearing except those that came from other states brought in cargoes of grain, or along the railroads.

"At one time the Queen & Crescent railroad inaugurated a rat killing campaign, induced to do so by the epidemic of the bubonic plague which was spread by rats in New Orleans. It would be well for every railroad to inaugurate such a campaign, educating those along its lines to destroy the rats and to rat proof their buildings.

"It is estimated by the most conservative authorities that rats eat and destroy every year in the United States a hundred million dollars worth of grain and various forms of farm products. In addition to this they are a constant menace to the health of those in whose houses they live. Is it not worth while for the citizens of the United States to spend whatever is necessary to save that hundred millions of dollars a year and to remove that menace to their health?

"If in addition to its other many advantages it could be advertised that Kentucky is free of rats, would it not be an inducement to immigrants to come to buy land? Could there be a better investment for the citizens of Kentucky to make than whatever amount is necessary to exterminate the rats that are here and prevent their coming by a never ceasing vigilance and by rat proofing the buildings."

PATENT MEDICINES.

The following very interesting editorial on Patent Medicines appeared in a recent issue of the *Lexington Herald* and will be read with interest by our practitioners:

"In a very exhaustive and fair treatment of the subject, Wallace's Farmer tells its readers about patent medicines. Of more than passing interest is this statement:

"Man, in his movement upward, passes through about four stages: first, the savage stage, in which he depends on the witch doctor or medicine man to cure him by magic. The second is that in which our grandfathers were, when they depended on herbs and roots which they gathered themselves, and the use of which, by long experience, they had found helpful in alleviating or preventing certain diseases.

"We are now living in the third stage—the patent medicine age. The more civilized and enlightened portions of our people are gradually growing out of it, and learning that the best cure for disease is prevention. They are learning how to live so as to lessen disease by pure air, pure food, pure water and proper exercise.

"The agricultural experiment stations are doing us good service by analyzing the various patent medicines, many of them advertised widely only a few years ago. They are telling us in plain language just what these medicines are made of."

"There is no doubt that the fraudulent part of the patent medicine business is either dead or dying. The people are coming to know more about disease, its causes and the proper treatments. Prevention is becoming a powerful method in public health. Prevention is economic; it pays. With this fact thoroughly appreciated by the public, there will be less hold from medical mysteries, whether practiced by the patent medicine manufacturer or by the quack practitioner. There are many roots and herbs that will come back into medicine. The age of pills and tabloids and their hold upon the public is passing. Plants and their medicinal effect are to be reclassified and it will be found out as to their best form for medical effect. Serums, vaccination, and, finally correct living and sanitary protection are to take their place in preventive medicine.

"A reform which takes active legislation to-day, is, frequently, to-morrow a common practice of the people."

DR. U. L. TAYLOR.

In April, 1911, an editorial in the *Courier-Journal*, under the title of "A Vigilant Health Officer" referred to a report of the Fiscal Court of Adair County by Dr. U. L. Taylor. After telling in considerable detail of Dr. Taylor's work during the year, it closed as follows: "If every county in Kentucky

properly remunerated. It is a lamentable fact that fiscal courts in general are not very generous in making provision for this important work, and the people largely are indifferent to it. The public money cannot be expended for any better purpose than for the conservation of the public health."

On August 9th, the Editor had a letter from Dr. Taylor telling about his efforts to keep up



DR. U. L. TAYLOR

had a health officer as vigilant and active we should see some speedy results in reducing the mortality average and the cost of preventable disease. It is to be hoped the Fiscal Court of Adair County appreciates the work of its health officer and will see that he is

the medical organization in his county and was interested in the then approaching meeting of the State Medical Association in Louisville, which he felt sure he would attend as the delegate from Adair county.

On September 2nd, Dr. Taylor, while walk-

ing from his room to his sleeping apartment, fell and when his family reached him, had expired. On the 21st day of last April, he had celebrated his 82nd birthday. Up to the day of his death, he was active as a young man. He had been the health officer of Adair county since 1878, having served longer continuously than any other similar official in the State. For many years he had been a regular attendant at the meetings of the State Medical Association. He loved his profession and honored it. He was a constant reader of the leading medical periodicals. He was a native of the county in which he practiced so long; was a devoted Christian and was ever ready with his presence and purse to do all he could in advancing the cause of Christianity.

The JOURNAL honors itself in honoring the memory of Dr. Taylor and young physicians all over the State may well look to him as a model physician of the old school.

THE LAW ABOUT SORE EYES IN BABIES.

The failure of a widwife in Louisville to use the proper preventive treatment for ophthalmia in the newborn, which is defined by the law enacted in 1914 as, "any inflammation, swelling and redness of either eye or of both eyes, either apart from or together with any unnatural discharge from the eye or eyes of babies" has been widely commented upon by the press, and the JOURNAL has been surprised to receive letters from a number of physicians who did not seem to understand this simple law.

It is the duty of every physician and of every midwife, or when there is no physician or midwife in attendance, it is the duty of the head of the family or of a trained nurse, if there be one, to report any case of ophthalmia within six hours to the city health officer, if the case shall have occurred in a city, or if the case occurred outside the city, to the county board of health. And it is also the duty of every physician to report each case of trachoma diagnosed by him within five days after such diagnosis to the health officer. And any physician, midwife, nurse or head of family failing to make the report required by this law shall be fined not more than one hundred dollars, and persistent failure or refusal on the part of a physician, midwife, or nurse to make such report or to take the necessary precautions to prevent the spread of such disease shall be a proper ground for the revocation of the license to practice, after due notice and hearing, as provided by law.

It is important for the physicians of the State to know that no defense could be made

against a suit for malpractice if a case of gonorrheal ophthalmia should occur in a baby in which the prophylactic recommended by the State Board of Health had not been used. The law requires that the proper preventive methods shall be adopted. The State Board of Health has passed a rule declaring that the proper preventive method in this State shall be the instillation of two drops of a two percent solution of nitrate of silver in each eye. This precaution will practically always prevent ophthalmia. If it fail, protect yourself and your patient from blindness by instituting prompt and proper treatment and making an immediate report to your health officer. If the family for any reason fails or refuses to submit to proper treatment, telephone or telegraph the State Board of Health and immediate steps will be taken to protect the baby's eyes. We trust no Kentucky physician will be found derelict in this new duty required by law. Your county health officer can advise you in regard to a dropper in which you can carry the nitrate of silver solution in your obstetrical bag always ready for action.

ILL EFFECTS OF OUTDOOR SLEEPING.

A far fetched editorial under the above title appears in the November issue of the ordinarily excellent *Journal of the Indiana State Medical Association*. The author is evidently an otolaryngologist, and hitches the cart before the horse in a manner that would be amusing if it were not apt to be misinterpreted by a careless reader. If he had headed his editorial "The Danger of Illy Ventillated and Overheated Rooms in the Daytime," it would have been valuable; for the most serious cause of catarrhal inflammation of the upper respiratory tract is the over-heated and under ventilated offices and living rooms in the daytime. People are beginning to realize the importance of proper ventilation at night, but we have not emphasized sufficiently the importance of proper ventilation in the daytime. It is very rare that a room in which healthy human beings are rooming and working should be heated above 70 degrees and arrangements should always be made for frequent renewal of the air, but while inaugurating a campaign to secure this, let us not give up nor cause people nor doctors to have less confidence in the importance of open air sleeping at night. No one should expose themselves to raw and penetrating winds without a screen between them and the wind, but every well person as well as sick ones should arrange to get plenty of fresh air both day and night.

A MEDICAL DICTIONARY.

Every practicing physician needs a medical dictionary. The JOURNAL has been making a careful study of dictionaries recently with a view to being able to recommend to the practitioners of the State one which would actually render them the necessary service with the lowest investment of money. We find the American Illustrated Medical Dictionary, by Dorland, published by the W. B. Saunders Company of Philadelphia, to easily lead in practical value and low price. It is new and complete and contains elaborate tables. This is the eighth revision of this work. It contains 1,135 pages with 331 illustrations, of which 119 are in colors. Our readers will be interested in knowing that it contains 1,500 more terms than the next preceding edition. With a flexible, leather cover it costs \$4.50; and with the same cover and thumb index, costs \$5.00. The splendid work of the Saunders Company in getting out this practical Dictionary should be recognized by the profession, and every doctor will find it of immense value in his work.

“MAY WE COUNT ON YOUR ASSISTANCE?”

The *Indiana Medical Journal* says: “When an exploiter places on the market a nostrum of no intrinsic value (excepting the bottle and cork) for which he claims virtues which it does not possess . . . he robs the purchaser of his money and health, thereby becoming a thief of the most despicable order. Any medical journal printing the fraudulent claims contained in nostrum advertisements is an accessory to this act of thievery and the subscriber to such journals voluntarily assumes the position of an accomplice.”

“A Brooklyn physician writes us,” says “Cast your eye over the enclosed advertisements [from the *Therapeutic Gazette*] and then wonder at the nerve in asking subscriptions from the profession.” Almost the same mail brought us a similar protest accompanied by advertisements from the *New York Medical Record*, these differing from those in the *Therapeutic Gazette* in degree but not in kind. Another New York physician sent a collection of advertisements from the *New York Medical Journal*. Some of the advertisements sent us are of the rankest frauds, neither better nor worse than the fraudulent ‘patent medicine’ advertisements appearing in lay periodicals—in fact, some are of ‘patent medicines’ which many of the better lay magazines will not admit to their advertising pages. We hope that our correspondents have expressed their views on the subject to the

publishers of the respective journals; nothing will so speedily bring about reform as determined and practical protest from the profession. One of the advertisements enclosed by a correspondent is pertinent here: “May we count on your assistance?” ingenuously inquires the Berlin Laboratory, Ltd., and with cool effrontery continues: “We are telling the layman about Intesti-Fermin. . . . May we count on your assistance in spreading this message to everyone . . . ?” Now who and what doctor may ‘count on your assistance?’ Is it the quack and the nostrum manufacturer? Do you want to be an accomplice in what the *New York State Journal of Medicine* terms an ‘act of thievery’? Do you wish to assist in the promotion of Bell-Ans, Sal Hepatica, Campho-Phenique, Angier’s Emulsion, Bromidia, Tongaline, Sanatogen, Sanmetto, Kutnow’s Powder, Phenalgin, Micajah’s Wafers, Ammonol, Chionia, Formamin, Ane-demin, Neurosine, Pasadyne, etc.? If so—lend your support to the medical journals that advertise them. If, however, it is the public—your own patients—that may ‘count on your assistance,’ then your course is equally clear; refuse to accept from the mail, subscribe for, contribute to, or in any way countenance the journals that help to keep alive quackery and fraud—and *let the publishers know why!* The result will soon be evident. Do not, however, stop with this negative measure; it is equally important to sustain those journals which, without the backing of professional organization, have cleaned up their advertising pages and freed themselves from the blighting influence of the nostrum evil.”

SCIENTIFIC EDITORIALS.

FUSS AND FEATHERS IN ANESTHESIA.

The tendency of the past few years to bring into use an imposing array of mechanical apparatus, of paraphernalia elaborate and complicated for anesthesia administration, is now happily waning. True, certain methods of induction and of administration require mechanical apparatus, but the individual behind such apparatus is the all-important factor. For the successful administration of nitrous-oxide-oxygen, for example an instrument designed for this purpose is necessary; but such instruments have become less complicated in the past two or three years. And better work is done with this agent now than ever before, in, of course, cases properly selected for its use.

The use of the word “automatic” as applied by the inventors or manufacturers to

some instruments and apparatus for use in anesthesia administration, rather conveys the idea that the machine, strapped or attached to the patient and started going, will then perform the human function of administering an anesthetic throughout.

That the dosage of any agent can be nicely regulated, that gas can be conducted to the patient at a known pressure; that ether can be vaporized at a distance from the patient; this vapor warmed, and delivered at a pressure of so many millimeters of mercury—through a face mask for ordinary breathing, or through pharyngeal tubes or intra-tracheal tube, we know; but we also know that the human mind is fallible, and hence of necessity any of its products are fallible, and the apparatus which is “automatic” should be closely watched, for behind the equipment, and of most importance for safe and efficient anesthesia is the judgment, experience and ability of the anesthetist. Merely another case of the “Man Behind the Gun.”

No better resume of the present status of anesthesia has appeared than the article of Bevan of Chicago in the *Journal A. M. A.*, issue of October 23rd. While most anesthetists will take issue with him in some of his conclusions, yet his sound conservatism throughout, and his evident preference for the greatest simplicity of equipment and technique that is compatible with good work and safe work, is reassuring and shows, as many other things now show the tendency of the pendulum to swing the other way.

What this special work has needed of late years is a Joseph Price in its ranks, a really big man to discourage the use of a multitudinous array of machinery the principle use of which seems to be to “make it hard,” and to impress the laity.

It is not that we believe that many special methods of anesthetization have not a field of use, but that methods which have been tried and found worthy in hundreds of thousands of cases should not be ruthlessly discarded for others because the latter have a spectacular flash, and may impress our gallery that we are “right up to date.”

“Be not the first by whom the new is tried,
Nor yet the last to cast the old aside.”

W. H. LONG

ORIGINAL ARTICLES

A STUDY OF THE SECRETIONS OF THE MAMMAE: A FACTOR IN THE CAUSE OF ECLAMPSIA: TREATMENT OF ECLAMPSIA.

By W. E. GARY, Louisville.

Eclampsia has heretofore proven to be a baffling subject to all investigators and has become known as the Disease of Theories, because of the number of theories advanced as to its cause.

Practically all authorities are agreed that eclampsia is caused by an auto-intoxication or toxemia, giving rise to albuminuria, oedema, dizziness, headache, convulsions, etc. A majority further agreed that this toxemia is brought about by the accumulation of toxins manufactured by the foetus or placenta.

Our present day treatment consists of emptying the uterus of its contents and elimination of the toxins by purgation, sweating, venesection, injection of saline solution, etc.,

According to Edgar, eighteen per cent of cases occur post-partum and forty per cent are not benefitted by emptying the uterus, making a total of fifty-eight per cent, which is conclusive proof in the mind of the writer that the foetus has nothing to do with the immediate cause whatsoever. When I saw a case of milk-fever in a cow the first time about seven years ago, I noticed the similarity of eclampsia, and have been watching all cases of milk-fever I have come in contact with since, collecting all the history I could get, in about eighty cases all told.

In February, 1912, Healy and Kastle issued a bulletin on parturient paresis (milk-fever) and eclampsia: and the Internal Secretion of the Mammae as a Factor in the Onset of Labor. Their experiments consisted of injecting pregnant guinea pigs with colostrum from a cow suffering with milk-fever, and in later experiments from normal cows, producing abortion, hepatic and kidney lesions similar to the lesions found in these organs in eclampsia. Their conclusions that there was manufactured a substance by the mammary gland as an internal secretion to produce labor, and that this hormone or toxine was the cause of milk-fever or eclampsia, might explain the cause of milk-fever, which only occurs after parturition, but does not explain in the mind of the writer the cause of eclampsia.

Eclampsia occurs before parturition in a majority of cases, and often before full-term, even at the fifth or sixth month of pregnancy. It does not seem possible that the mammae

should produce two kinds of secretions, one an internal, that should prove so toxic to the mother and to guinea pigs and not to the nursing infant, another, an external secretion for the nourishment of the young. In following out in my mind the various phenomena of pregnancy, it was forced on the writer that there must be some reason why the mammary glands should begin to develop at the very beginning of pregnancy, and to continue developing gradually until parturition. Then in one or two days after parturition enlarges considerably more. If it were the purpose of nature to simply develop these glands to secrete milk after the birth of the baby, why is not the development complete at the time of birth? The only reasonable explanation is that the function of the mammary gland is to furnish an internal secretion for the nourishment of the foetus, the increase in size of the foetus demanding a corresponding increase in size and output of the gland.

"Miss Lane Claypon and Starling found that injections of aqueous extracts of rabbit foetuses into a virgin rabbit, every one to three days over a period of three weeks, led the glands which were at first almost invisible, to become markedly hypertrophied, with enlargements of the ducts and to the discharge of a thin fluid, and in multiparous rabbits to the discharge of true milk."

After parturition this internal secretion becomes an external secretion to which is added the butterfat, carbohydrates, water, etc., accompanied with an increase in size and output of the gland after the second or third day. It is a well known fact that in the opossum and kangaroo owing to the smallness of the maternal pelvic orifice, the young are born much less mature than the young of other animals, yet when they attach themselves to the nipples of the mammary glands in the pouch of the mother, they are nourished to maturity. The nature of the nourishment received from the mammary glands must be very similar to the nourishment received in utero. It has never seemed reasonable to the writer that the digestive organs of the infant could possibly be sufficiently developed at birth to begin functioning from the first day, and be able to sustain the life of the infant.

There must be some part of the secretion of the gland that does not need digesting, similar to the nourishment received in utero. The slight loss in weight of the infant for the first week may be due to the fact that while in utero the nourishment went directly into the blood of the foetus without loss, but after birth it passes through the alimentary canal where waste occurs, which is only overcome when the digestive organs begin to digest the

fats, carbohydrates, etc., in the added secretion of the mammary gland.

Now what is the nature of this secretion?

When health departments first began the examination of the sediments of milk, they found in some cases large numbers of so-called pus cells. These milks were accordingly condemned as unfit for use, the excessive number of leucocytes being attributed to a local inflammation of the udder or mammitis.

Boston went so far as to establish a standard of 500,000 leucocytes per cubic centimeter, above which milk was condemned. About four years ago, Dr. Vernon Robins reported the milk from 55 herds as having an excessive number of leucocytes. Examinations were made of the herds, and in only one herd was mammitis found to exist. Hastings and Hoffman of the University of Wisconsin found leucocytes in every cow's milk in the herd examined. They found no existing cases of acute mammitis, but stated that from the history of the herd there may have been associated in a considerable number of cases a previous slight inflammatory disturbance. They concluded that milk from these cows should not be condemned as injurious.

Cary in a paper before the A. V. M. Association claimed that boric acid solution injected into the udder produced a milk free from bacteria and leucocytes. Hoffman proved that injections of solutions of boric acid, normal salt, and sterile water decreased the bacteria but increased the leucocytes. He explained the decrease of the bacteria to the action of the leucocytes and the increase of the leucocytes to the mechanical irritation of the udder. All the investigators have heretofore believed the leucocytes to be present in milk as the result of a present or past mammitis, irritation of the udder, or to be attracted there by the presence of bacteria.

Reviewing the work of these investigators and remembering our own findings, it did not seem reasonable that there should be such a waste of leucocytes just because of an old mammitis or other cause, equally as unreasonable.

It appeared to the writer that the leucocyte must be a normal constituent of milk, and that it had a definite physiological function to perform, that the vital portion of milk referred to by chemists as vitamins, was due to the presence of these leucocytes.

It was shown by the Department of Agriculture in 1909 that milk had agglutinating power over bacteria similar to blood in typhoid agglutination. This power with the occurrence of the leucocytes and the fact it was intended for the nourishment of the young, led the writer to believe that this was the explanation of the nature of the internal secre-

tion, and also why mother's milk gave infants greater vitality and immunity from contagious diseases than did condensed milk or other prepared foods having practically the same chemical constituency.

Mr. F. W. Kurk, my laboratory associate, and I, carried out the following lines of investigations: One hundred and forty-nine samples of breast milk, colostrum, goat milk, dog milk and asses milk have been analyzed and a leucocyte count made. The method used in counting leucocytes, differed slightly from the Buckley and Doane method and was as follows. We centrifuged 10 c.c. of milk for 10 minutes, finding that fewer leucocytes were held by the butterfat when centrifuged at such low rate of speed. After centrifuging, the top portion was siphoned off, all except about 2 c.c. The butterfat was removed from the tube with a cotton swab. Then Loeffler's alkaline methylene blue was added to stain the cells and water to make 10 c.c. This was thoroughly mixed and a drop placed on a Thoma-Zeiss counting plate, allowed time to settle and counted. The counts were estimated per cubic centimeter instead of per cubic millimeter, as is the case with blood counts.

In colostrum having large number of leucocytes, dilutions of 1-5 or 1-10 were made before centrifuging.

The results of these counts showed that in all colostrums examined within 24 hours after birth the leucocytes numbered from 3,120,000 to 5,560,000 except two, one of which ran 45,000,000 and another where a severe post-partum hemorrhage occurred, ran only 62,000. Breast milks after the first two weeks showed a leucocyte content ranging from 212,000 to 483,000 per c.c. A few cases after five or six months lactation showed only from 50,000 to 70,000 per c.c., and artificial feeding had already been resorted to, to aid the supply of nourishment to the infant.

Bitch milk early in lactation showed 780,000 leucocytes per c.c. Goats milk in one case late in lactation 62,400, in another case, period of lactation unknown 140,400; asses milk late in lactation showed 78,000 per c.c. Two typical interesting cases in women where counts were made daily showed leucocyte contents as follows:

NO. I.

October 13	4,992,000
October 14	13,728,000
October 15	2,184,000
October 16	2,028,000
October 18	478,000
October 19	
October 20	780,000
October 21	624,000

NO. II.

1st day	5,560,000
2nd day	6,084,000
3rd day	5,616,000
4th day	2,028,000
6th day	14,976,000
7th day	21,752,000
8th day	24,396,000
9th day	28,626,000

Case No. 1, was normal in every way, but in case No. 2, the baby died at birth and no attempt was made to establish secretion. In both cases the number of leucocytes increased on the second day, decreasing on the third and fourth day, due to the beginning secretion of milk on the third day and the consequent dilution due to increase in fluid. No. 1 decreased considerably by the sixth day as full secretion of milk was established by that time. Case No. 2 had its heaviest secretion on the fourth day and only a few cubic centimeters a day from the sixth day until the patient left the hospital. All other cases examined have run a similar course to No. 1, where the baby nursed, and to No. 2 where the baby died and secretion was not encouraged. The results of these examinations of milk proved conclusively that there existed in milk as a normal constituent thereof in considerable numbers, mononuclear and polymorphonuclear leucocytes.

VITALITY OF MILK.

It has long been known that heating milk to 80 degrees or 85 centigrade, destroys its digestibility and otherwise changes its nature. It has been explained that, heating destroys the enzymes, known as peroxidase, galactase, and lipase found in milk. The tests to differentiate raw milk from heated milk as used by Leach, Storch, Kastle and Porch, and other authorities are based on the fact that peroxidase is present in raw milk but absent in heated milk.

Kurk and I found that the addition of centrifuged leucocytes to milk that had been heated to 90 C. gave the peroxidase reaction after incubating two hours, but to less degree than raw milk.

We also found, however, that a stronger reaction occurred when the leucocytes used were from milk freshly drawn from the cow instead of several hours old. The test used was the one recommended by Leach, known as Storch's test and consisted of the addition of 2 drops of hydrogen peroxide and two drops of a two per cent solution of paraphenylene-diamine, to about 10 c.c. of milk. The tests made were as follows:

No. 1, raw, whole milk; No. 2, raw milk with leucocytes removed by centrifuging; No. 3, heated milk; No. 4, heated milk plus leucocytes.

tes; No. 5, heated milk plus leucocytes from urine of a pregnant woman.

No. 1, became blue promptly, after 24 hours turned pink, and coagulated.

No. 2, became blue promptly, did not turn pink, and did not coagulate.

No. 3, did not turn blue until after 24 hours, did not turn pink or coagulate.

No. 4, became blue, slowly, after 24 hours became pink, and coagulated.

No. 5, became blue slowly, after 24 hours became pink and coagulated.

The results in these tests show that the leucocyte has the power to regenerate the peroxidase reaction in heated milk, and led us to conclude that the peroxidase reaction was due in both raw and heated milk plus leucocytes, to the activities of the leucocytes. The secondary reaction and the coagulation of all milk except the centrifuged and heated milk, are further proof of the activity of the leucocyte. The leucocyte from milk and from urine of a pregnant woman gave the same reactions. The failure of the heated milk and the milk without leucocytes to coagulate, shows that the leucocyte plays a part in the coagulation of milk, and that it is a similar process to the coagulation of blood.

A series of tests was made similar to the above without the addition of hydrogen peroxide, which prevents the growth of bacteria. The results showed that the milks to which leucocytes from milk and urine had been added, coagulated in about one-half the time it took the raw and centrifuged milk to coagulate, proving conclusively that the leucocyte is active and plays a part in the coagulation.

The non-coagulation of the milk in two and three of the first series was due to the absence of leucocytes, or to the killing of the leucocytes by heating and to the prevention of bacterial action by the hydrogen peroxide. In the second series bacterial action was not hindered and coagulation occurred, but 24 hours later in the centrifuged and heated milk than it occurred in the milk to which leucocytes were added.

Tschernowzski found peroxidase in leucocytes. It also has been found in the mammary gland and according to Hilderbrandt occurs to much greater extent in the active gland as compared with the inactive one. In view of our findings, together with those of other observers, it would appear that the active principle of milk, that which is destroyed by heat, is the leucocyte and that the so-called enzymes, such as peroxidase, etc., are very probably by-products resulting from the leucocyte activity.

Microscopical findings in examination of from 450 to 500 specimens of urine from

pregnant women showed leucocytes in practically every case. Nearly every case of pregnancy showed a large number of leucocytes in the last few weeks, some showing as high as 12 to 14 per field in a drop of unsedimented urine using a 1-6 objective. Every case of albuminuria of pregnancy not complicated with a previous nephritis, contained large quantities of leucocytes and no casts at first. Casts appeared later in some cases. One case a patient of Dr. Tuley's, Mrs. A., showed one gram per liter of albumin in a catheterized specimen with a heavy sediment of leucocytes. Blood count showed 12,812 white cells. There were some slight secretion from the mammary gland. A breast pump was used three times a day until delivery three weeks later. The colostrum thus secured showed 3,774,000 leucocytes per c.c. Two days after this treatment was instituted, albumin disappeared from the urine and did not appear again. A blood count four days after beginning treatment showed 11,250 leucocytes.

Another case, patient of Dr. Leo Bloch's, with this history furnished by Dr. Bloch, had eclamptic convulsions, with four per cent albuminuria, gave birth to a dead macerated child. Elimination was practiced together with the withdrawal of one pint of blood and the injection of normal saline.

With Dr. Bloch I saw her 12 days later. Patient was able to be about, but complained of dizziness. Albumin in urine, .7 grams per liter, with large amount of leucocytes in sediment. Blood count 12,600. No secretion of mammary gland had been noticed. A breast pump was used every two hours and the secretion thus collected showed 936,000 leucocytes per c.c. Urine on the next day showed .6 grams of albumin per liter; third day, .3 grams; 4th day, .5 grams, no treatment for 24 hours previous; fifth day, .3 grams; sixth day, trace; seventh day .5 grams, no treatment for 24 hours previous.

Treatment was not carried out on third day giving rise to an increase of albumin on the morning of the fourth. Patient refused treatment after the sixth day. This case showed very plainly the influence of elimination through the mammary glands on the amount of albumin in the urine.

In three other cases in which this treatment had been used the albumin disappeared. In another showing 1.5 grams albumin, albumin decreased to .4 grams in four days, but remained about that point to present time, a period of two weeks. This patient had albuminuria of 1.5 grams for six weeks before beginning treatment, history prior to that unknown. The urine now shows few leucocytes, but a good many casts and it is very evident, there is a true kidney lesion present. In four-

teen cases of pregnancy about full term the blood count showed a leucocytoses with an increase of lymphocytes.

Kirke's and Howell's Physiologies state that the leucocyte count of blood is increased in pregnancy after the third month, and is most marked in the latter stages, coming back to normal a fortnight after parturition, attributing it probably to the general stimulation of the maternal organism. To determine whether or not these leucocytes had any connection with the nourishment of the foetus, Kurk and I made examinations in a number of cases of the leucocytes in the blood from the cord of the infant, the finger of the mother and the colostrum and could find no microscopical difference in size or appearance. We took a human placenta, washed it for several hours thoroughly in salt solution and then in .3 per cent acetic acid. Normal saline was then filtered through it until no leucocytes could be found in the centrifuged filtrate. Then a solution containing leucocytes from cows milk was filtered through, obtaining leucocytes in large number in the filtrate. There is an objection to this test in that we cannot be sure no small blood vessel was ruptured in the washing process. That the leucocyte pass through the placental membrane and carry proteid material to the foetus, there is no doubt in the mind of the writer whatever. The foetus obtains proteids from some source. They are not dializable and can only pass through animal membrane by being carried by a cell having amoeboid movement. That the leucocyte passes through adult tissue is easily demonstrated and it does not seem possible to prevent its passage through the embryonic tissue of the placenta.

Oxidases were found in the placenta by Etti and Preyer; and since they occur in the mammary gland, in milk, and in the leucocytes found in these organs as shown above, it is safe to conclude that leucocytes do pass through the placenta. The similarity of the nature of the nourishment of uterine and extra uterine life is thus explained. In view of these findings, the findings of Hoffman, that injection of boric acid, sterile water and normal saline increased the leucocytes; and the history of the development of the treatment of milk-fever, by the use first, of injections of a solution of iodide of potash to disinfect the udder, later injections of boric acid solution, then oxygen, and finally plain air, it was thought possible the explanation of the cure of milk-fever was due to the establishment of the secretion of leucocytes. Accordingly a cow was selected and leucocyte counts made of samples from two quarters, night and morning for six days. On the sixth day these quarters were injected with air and counts

made night and morning as before. The results are given in the following chart.

FRONT.

September 7—night	94,000
September 8—morn	78,000
September 8—night.....	31,000
September 9—morn.....	62,000
September 9—night	40,000
September 10—morn.....	46,000
September 10—night.....	62,000
September 11—morn.....	15,000
September 11—night.....	31,000
September 12—morn.....	46,000
September 12—night.....	4,856,000
September 13—morn.....	5,937,000
September 13—night.....	2,782,000
September 14—morn.....	4,000,000
September 14—night	3,250,000
September 15—morn.....	1,870,000
September 15—night.....	1,062,000
September 16—morn.....	broke.
September 16—night.....	1,312,000
September 17—morn.....	1,188,000
September 17—night.....	940,000

BACK.

September 7—night	203,000
September 8—morn.....	286,000
September 8—night.....	94,000
September 9—morn.....	158,000
September 9—night.....	94,000
September 10—morn.....	187,000
September 10—night.....	78,000
September 11—morn.....	94,000
September 11—night.....	78,000
September 12—morn.....	128,000
September 12—night.....	9,000,000
September 13—morn.....	12,750,000
September 13—night	10,250,000
September 14—morn.....	7,000,000
September 14—night	6,125,000
September 15—morn	6,312,000
September 15—night.....	1,750,000
September 16—morn	2,225,000
September 16—night	2,282,000
September 17—morn	1,625,000
September 17—night	1,437,000

The highest count before injection in the front quarter was 94,000, and in the back quarter 286,000. The highest count after injection in the front quarter was 5,937,000, 24 hours after injection and in the back quarter 12,750,000, 24 hours after injection. After injection the count ran very much the same course as it does in the beginning secretion after birth.

From these experiments it was concluded that milk-fever is a toxemia arising from the accumulation of the leucocytes in the body due to the suppression of the secretion of the mammary glands and that air pumped into

the mammary gland relieved this suppression and thereby affected a cure. Now since our experiments have shown that the secretion of leucocytes in the human to be similar to that in the cow and since albuminuria of pregnancy can be relieved by elimination through the mammary gland it is not unreasonable to conclude that milk-fever and eclampsia are the same thing and should be relieved by the same treatment.

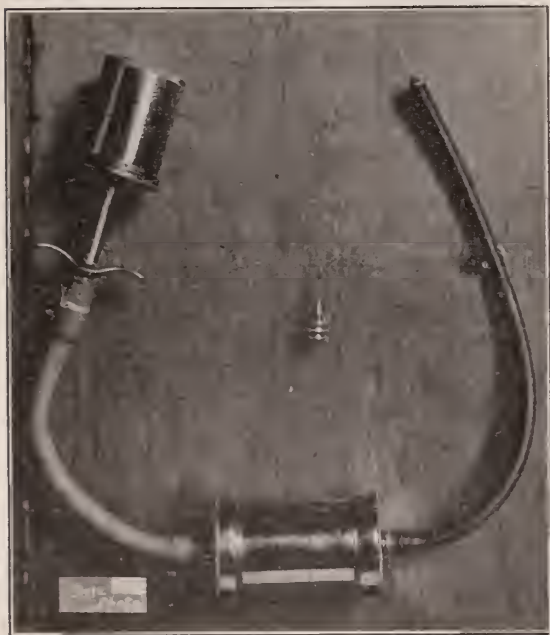
Through the kindness of Dr. Tuley and Dr. Shacklett, I had occasion to try this treatment on a case of post-partum eclampsia on November 1st. The patient was delivered of a live child at 10 p. m., on October 31st, by Dr. Shacklett. She had a convulsion and became unconscious at 11 p. m., never regaining consciousness. Dr. Tuley saw her in consultation on November 1st, and had her removed to Norton Infirmary where I first saw her November 1st, at 4:30 p. m. Patient was cyanotic with oedema of lungs, Cheyne Stokes' respiration and having convulsions every ten or fifteen minutes lasting from one to two minutes, albumin in urine 15 grams per liter, with leucocytes and casts, blood count 14,910 white blood cells. There was no secretion from

No. 21 hypodermic needle with openings on side.

The needle was introduced into the opening of the lacteal duct in the nipple of the gland. At 7:30 p. m., she had had two more convulsions and all the air had escaped from the glands. Air was again pumped into the glands, inflating them much more than at first.

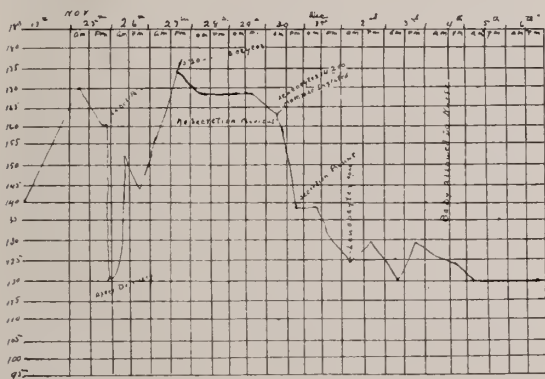
A gauge bandage was tied around the nipple and adhesive placed over the openings. The patient relaxed and had no more convulsions, never became conscious however, and died at 10 a. m. on the third of November from oedema of the lungs. Had this patient received this at first instead of 20 hours after the onset of the convulsions, there is no doubt in the mind of the writer the result would have been different. It has been found in cows that 99 per cent of cases get well where treatment is given in time. Delayed treatment does no good. The cessation of convulsions in this case showed that the further accumulation of toxins had evidently ceased.

Case No. 2. At the City Hospital. Pauline Bell, age 17 years, primipara, on November 25th. Vomited all morning; blood pressure 170, blood count 14,700, albumin in urine 10 grams per liter with a heavy sediment of leucocytes, no casts, Wassermann positive plus four. Patient was delivered of an eight months living child at 9:30 p. m. Blood pressure began to fall at 8:30 reaching 130 at 6 a. m. November 26th. There was no secretion from the mammary glands and none could be secured by use of the Breast pump. Hot baths, calomel and magnesium sulphate were given. Patient put on buttermilk diet. Blood pressure reached 150 on 26th, and 174 on 27th, remaining near that point until November 29th, the fifth day after delivery. Blood count on 27th, 15,200 leucocytes. No secretions of the breasts could be secured by breast pump to this date. Glands were inflated but not quite to full capacity on 29th. Blood count 14,200 leucocytes. Free secretion of colostrum showing 3,496,000 leucocytes per c.c. and 2,106,000 colostrum corpuscles were present six hours later. Blood pressure had fallen to 136, remaining at this point for 24 hours and then falling to 120. Blood count on December 2nd, showed 9,000 leucocytes. Breasts were pumped out regularly until December 3rd, when baby was allowed to nurse, the milk flow being sufficient to nourish it. The following is a chart of the blood pressure and also showing the kind, and the time of treatment given, prepared for me by Dr. Beeler.



the mammary gland which felt hard and contracted. An effort was made to start secretion with a breast pump and by massage without success. Air was pumped into the glands at 6:30 p. m., using this instrument, consisting of a hand-pump connected by tubing to a cylinder containing sterile gauze to filter the air through. This cylinder was connected by tubing to a blunt needle about the size of a

This case together with the findings in the experiment on the cow mentioned above shows that the inflation of the udder or mammae induces secretion, especially the secretion of leucocytes, disproving the explanation of Healy and Kastle which is: "That through extreme dilatation of the udder by oxygen or sterile air the blood supply of the mammary



gland is practically cut off entirely or diminished until the milk gland has the opportunity to resume its ordinary function thereby eliminating the toxic properties in colostrum and milk." It seems rather to start secretion and in this way to eliminate the accumulating toxins thereby giving relief to the distressing symptoms.

In our examination of colostrum we made a count also of colostrum corpuscles. Our records show that colostrum corpuscles were present in large quantities in the first few days, ranging from 1,000,000 to 10,000,000 per c.c. on the first or second day. The decrease was rapid after that and in some cases none were found after the fourth or fifth day. One case showed 10,000,000 colostrum corpuscles and 45,000,000 leucocytes per c.c. six hours after delivery, and in this case the secretion of milk was heavy twelve hours after delivery.

Another case where a severe post-partum hemorrhage occurred, no colostrum corpuscles were found and only 60,000 leucocytes. No secretion of milk occurred to any extent later. It appears to be the rule in all cases examined that the larger the number of colostrum corpuscles per c.c. the first day after parturition the sooner the secretion of milk appeared, the fewer the colostrum corpuscles at first, the later the full secretion of milk was reached. The colostrum corpuscles is from 3 to 5 times as large as the leucocyte and appears to be made up of broken down cells, leucocytes and fat globules. It is in all probability formed in the lumen of the alveolus from broken down epithelium pushed aside during the growth of the gland in pregnancy and serves as a means to block the escape of the

secretions. After parturition they are washed out by the leucocytes, fats and other secretions of the gland. When for any cause they are not eliminated as is the case in milk-fever in the cow and post-partum eclampsia in the woman there is a suppression of the secretion which becomes toxic to the mother and gives rise to the symptoms of poisoning. The dilation of these glands with air allows for the escape of these plugs or casts and the establishment of secretion and elimination.

Microscopical findings of the mammary gland from a pregnant cow showed the lumen of the gland to be filled up with such debris and leucocytes. The alveoli and the tissues surrounding the alveoli were filled with leucocytes resembling very much the condition found in tissues in acute inflammation. This cow was not secreting milk and there was no inflammation in the udder so that the presence of these leucocytes can only be explained as playing a part in the internal secretions of the gland.

CONCLUSIONS.

First. The leucocyte is a normal constituent of milk heretofore not recognized as such and is the vital portion of milk.

Second. The leucocytes are either manufactured in the gland or are used to carry the secretion of the gland to the foetus or to the infant. That they are manufactured in the gland itself is indicated by the fact that leucocytosis disappears in the mother shortly after parturition but leucocytes are found in the milk throughout the period of lactation, also by the fact they are found in such large quantities in the mammary gland of a pregnant cow giving no external secretion. That the leucocytes in the external secretion of the gland after parturition and those escaping through the kidney before parturition have the same characteristics indicate there is an internal secretion of these cells by the gland giving rise to a leucocytosis in the mother. When the leucocytes accumulate in the blood of the mother in excess of 12,500 or 13,000 they become toxic and albuminuria occurs, which can be caused to disappear in uncomplicated cases by inducing the external secretion of leucocytes from the gland.

Third. That this secretion does not affect labor in any way unless the accumulation is sufficient to become toxic. Withdrawal of the secretion of the gland before parturition and the elimination of the toxemia does not prevent or hinder the onset of labor and birth of the infant.

Fourth. That eclampsia is a toxemia resulting either from the accumulation of the internal secretion of the mammary gland greater than is needed by the foetus, and

greater than can be eliminated through kidneys or bowel before birth of the infant or to the suppression of the secretions of these glands after parturition.

Fifth. That where albuminuria of pregnancy exist the patient should be put on a diet, habits regulated, and elimination through the mammary glands instituted. A leucocyte count of the blood should be made and care exercised not to eliminate more than is necessary so as not to interfere with the nourishment of the child. In case of failure to do this, the uterus should be emptied of its contents and the glands inflated to the fullest extent, to establish quickly full secretion; together with elimination by purgation.

In post-partum eclampsia inflation of the glands and purgation should be employed.

THE LIMITATIONS OF NITROUS-OXIDE-OXYGEN IN SURGERY, AND ITS RECENT USE IN OBSTETRICS.*

By W. HAMILTON LONG, Louisville.

Nitrous-oxide-oxygen anesthesia for major operations is comparatively recent, and might be said to be still in that transition stage that characterizes everything new in medicine; the stage through which the Roentgen-ray, salvarsan, the Wasserman reaction, and other diagnostic and therapeutic procedures have passed, or are passing to find their proper niche. Hailed at first by the ever enthusiastic as the long-looked for "ideal anesthetic;" applicable to all individuals and operations, and absolutely devoid of danger; decried by extremists on the other end as having no field save possibly in the shortest and simplest of minor surgical procedures;—this agent or combination is finding its proper place as one of the most valuable anesthetics that we have, in selected cases.

Any physician who has given special thought to the subject of general anesthesia for a few years, and has worked with the agents used to induce and maintain general anesthesia must come eventually to the conclusion—through whatever enthusiasm and preferences his zeal may from time to time have led him—that no one of the agents or combinations now employed is suitable to all cases, is, in other words, adaptable to routine use. The specialist in anesthesia would no more attempt to limit himself to the use of one of these than would the intelligent general practitioner stoutly maintain that a single drug or a routine combination of drugs

is efficient in a given group of symptoms regardless of the history of his case, and heedless of the individual type—and this personal equation plays as great a part in the selection of the anesthetic, as it does in therapeutics. Realizing that there is no routine anesthetic, and that careful case selection—bearing in mind the character of operation contemplated, the type of individual, the contra-indications that may be known to exist, and the methods of the operator,—is the only scientific way of choosing the anesthetic, those of us who are avowedly conservative—and I write frankly from the standpoint of the anesthesia specialist—have welcomed nitrous-oxide-oxygen as one of the most valuable combinations when properly given to properly selected cases, that we have. We have in it one more weapon, and a most valuable one, from which, when our judgment is taxed, we can choose. We marvel that its value in surgery was so long overlooked.

It should be always remembered in making the choice of the anesthetic, and in considering nitrous-oxide-oxygen, that this combination, however skillfully given, and in the vast majority of patients produces, at the best, a light anesthesia. By its continuous administration this anesthesia may be indefinitely maintained, but beyond a certain degree: achieved in five or six minutes, it is not deepened. The condition is a true anesthesia, characterized by total unconsciousness, without voluntary muscular action, but also without the profound muscular relaxation, so much desired by most surgeons in abdominal work, hence before selecting it for abdominal work several things should be taken into consideration: the physical type, habits, etc., of the patient, the character of operation with reference to the probable amount of intra-abdominal, and especially upper abdominal manipulation, trauma, visceral insult, that is likely to be found necessary, and the accustomedness of the surgeon to working through abdominal muscles which are rigid as compared to the flaccidity achieved by chloroform or ether narcosis. The surgeon who wishes to use nitrous-oxide-oxygen anesthesia in his abdominal work, whenever possible must accustom himself to this rigidity, and will be assisted to some extent by local anesthesia at the site of operation, after Criles' technique, and by the use of the self-retaining retractor, whenever feasible.

More or less ether will be found necessary in the large majority of so-called gas anesthetics for abdominal work, and it is obviously unfair, or rather, over-fair to the straight nitrous-oxide-oxygen technique to call such administration nitrous-oxide-oxy-

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gen anesthetics" better would we use the phrase nitrous-oxide-oxygen-ether anesthesia, as awkward as it is, to designate those continuous administrations of nitrous-oxide-oxygen with sufficient ether given from time to time to produce the necessary relaxation. An anesthesia of nitrous-oxide-oxygen, augmented by ether given in sufficient quantities to produce its effect, is not a nitrous-oxide-oxygen anesthesia, and it is deplorable that such petty dishonesty should be resorted to in order to give an excellent, but in many cases inadequate method, a greater reputation than is its due. Many carelessly referred to nitrous-oxide-oxygen anesthetics have been in reality nitrous-oxide-oxygen-ether anesthetics, and should have been so called. We will, in speaking of the limitations of nitrous-oxide-oxygen anesthesia, have in mind only the straight nitrous-oxide-oxygen technique, since any patient can be sufficiently anesthetized for any operation with ether.

In practically all operations save abdominal, and in most individuals, excepting pronounced alcoholics, powerfully developed "out door" men such as athletes and laborers, and extremely nervous women, nitrous-oxide-oxygen is an entirely suitable anesthetic. In any case, demanding immediate surgical intervention, and exhibiting well defined contraindications to ether or chloroform, such as acute or sub-acute nephritis, acute bronchitis and active pulmonary tuberculosis, nitrous-oxide-oxygen should be chosen, despite its shortcomings, and the operator should bear with its inadequacies for the better welfare of the patient. It is to this class of patients, encountered from time to time by all surgeons, that nitrous-oxide-oxygen comes as a special boon—the patients that can't be postponed, and to whom ether or chloroform would be decidedly hazardous.

Nitrous-oxide-oxygen is ideal for all short operations, examinations requiring anesthesia, cervical and rectal dilatations, fractures and dislocation reductions; and its inconvenience, clumsiness and cost should not deter us from selecting it for those cases; for perineal operations and breast and goitre extirpations, it has been found eminently satisfactory: especially in the last two, if the anoci-association technique be employed in conjunction. In abdominal work I frankly prefer ether unless contra-indicated as above mentioned, with nitrous-oxide-oxygen for induction only, continuing with the semi-open method. Ether properly given is practically free from danger, and from unpleasant after effects, and is far more satisfactory in its action than is nitrous-oxide-oxygen. To infants under four or five years old chloroform is given, and these form

practically the only class of cases in which this agent is used.

To sum up briefly: Nitrous-oxide-oxygen is so valuable an agent that no trained anesthetist would be without the equipment and experience necessary for its use. It should be given only in selected cases, and the experience and judgment of the anesthetist should be the deciding factor in this selection. There should be a definite distinction made between a nitrous-oxide-oxygen anesthesia and a nitrous-oxide-oxygen-ether anesthesia. Any amount of ether given till its effect is observed makes the anesthesia in part, and principally, an ether anesthesia. The use of an imposing apparatus, replete with complications nickel-plating and rubber tubing, adds nothing to the safety or efficiency of ether and the use of a nitrous-oxide-oxygen apparatus does not necessarily mean that a nitrous-oxide-oxygen anesthesia is being given.

I have tried to present briefly my opinion as to the rightful place of the nitrous-oxide-oxygen combination among the agents used for surgical anesthesia. In short and minor procedures and office work, decidedly the agent of first choice. In prolonged operations of any kind away from the abdomen; the agent of choice. In abdominal work, an agent of necessity. That is my broad, general rule, as nearly as a general rule can be applied. As has been said, careful case selection should always be followed. As to the safety of nitrous-oxide-oxygen, it is admittedly much safer than ether or chloroform, but to employ a sort of Hibernianism that I have used before "Good anesthesia by a dangerous agent is sometimes safer than poor shallow anesthesia by a safer drug." We will not soon see nitrous-oxide-oxygen take the place of the older and simpler methods, nor should it, but it has made a definite and firmly established place for itself in surgery, and has recently been used considerably in a field for which its properties, those of an ideal analgesic, and light anesthetic—peculiarly fit it—viz.: obstetrics.

The propaganda for "Twilight Sleep" which was so vigorously conducted by some of our magazines a couple of years ago, so wrought up the womanhood of the country, that many a doctor's life was made miserable by the demands upon him for "Twilight Sleep" on the part of his maternity-approaching clientele. The subject has been handled with the glamor and fantastic enthusiasm so characteristic of the lay press in its treatment of anything technical, and especially of anything medical, that many of the articles left nothing to the judgment of the obstetrician, but intimated that unless he used this method he was out of date, and unscientific, if not

ignorantly cruel. The magazine writers did not state if they knew, that practically the same agents and combinations, and a similar technique had been used in this country, and more especially in the rural districts for several years. The Twilight Sleep campaign in the popular magazines simply "took hold" and swept over the country.

It occurred to many anesthetists and obstetricians in this country, especially the former, familiar with nitrous-oxide that this agent, with or without oxygen could be used successfully and with safety to both mother and child, in labor. Nitrous-oxide-oxygen analgesia in obstetrics has been called the "American Twilight Sleep," and at present the subject is occupying the interest of anesthetist and obstetrician more than any other. It was made the subject of his President's Address before the American Association of Anesthetists in June by Teter, and Guedel, of Indianapolis, chose it for his subject at the Inter-State Association of Anesthetists in May. My own personal experience has been practically nil as compared with that of the men in the larger cities who have large hospital facilities, and it is to theme that we must look for the present status of this work. I can offer you now the consensus of the best opinion in the country, and predict that if a "Daemmerschlaf"—"Twilight Sleep" or "Sunrise Slumber" is to be used,—and it is certainly our duty to alleviate the pains of labor if possible—the nitrous-oxide-oxygen will be found better and safer, and if its greatest drawback expense can be met, more popular than the morphine-scopolamine method.

If the popular magazine campaign has awakened us to the duty we owe the woman in labor; let us be thankful, though ashamed. It must be remembered that while labor is a physiological process, and many ultra-conservative physicians decry the use of anesthetics on the ground that nature in her wisdom decrees that the female should suffer pain in the bearing of her young, our modern over-civilized, over-sensitized women, with their highly organized nervous systems, the result of the artificial civilization of which they are the product, suffer more acutely these natural pangs than do their sisters of the savage tribes, to whom, as to the lower animals, bearing offspring is a shorter, and relatively far less painful function. As Teter says, (1) "If her (the civilized woman's) suffering has been brought about by the advancement and progress of a refined and cultured race, why then should we not continue to advance to meet the condition?"

Nitrous-oxide analgesia—not anesthesia for the control, or diminution of the uterine contractions has many advantages over methods

of hypodermic medication, and over other agents given by inhalations. It is safe, to both mother and child. Given only at the onset of each pain, and withdrawn as the pain subsides, it produces, if properly given and sufficiently diluted with air or oxygen, analgesic state of practical imperceptibility to pain without loss of consciousness. Its great advantage over ether and chloroform is its far greater safety and the proven fact, that if given to light anesthesia—not intermittent, but maintained—it does not decrease the force of the uterine contraction. Webster, of Chicago, says, (2) "The strength of uterine contractions is not diminished, no matter how long the administration of the nitrous-oxide gas is continued," and Lynch observes (3) "The gas in analgesic doses does appear to stimulate the uterine pains."

The use of nitrous-oxide in obstetrics was early objected to on the ground that asphyxiation of the child was likely. It has been shown since and practically all observers are agreed that if the gas be given properly diluted with oxygen or air, preferably the former, this danger is nil. The mother must not be permitted to become cyanotic and a sufficient quantity of oxygen easily prevents this. Thus, Teter: (1) "The child will be born pink, and will cry spontaneously and lustily." It is obvious that, while a slight degree of cyanosis is sometimes necessary in the maintenance of a prolonged nitrous-oxide-oxygen anesthesia, the analgesic state, with its greater dilution by oxygen or air, should never be so attended, and with the mother kept at all times pink, asphyxia of the child is impossible.

The technique is simple in the average normal case, though of course, it must be varied as conditions demand. Guedel (4) has made a classification of the technique to cover all cases as follows:

- (1). Analgesia: individual pain application; the patient holding the inhaler.
- (2). Analgesia; individual pain application; an attendant holding the inhaler.
- (3). Analgesia; continuous application; the patient holding inhaler.
- (4). Analgesia; continuous application; an attendant holding inhaler.
- (5). Anesthesia (light but complete narcosis); individual pain application; the patient holding the inhaler.
- (6). Anesthesia; individual pain application; an attendant holding the inhaler.
- (7). Anesthesia, continuous application.

I disagree with Guedel as to the advisability of the self-administration for I believe that nitrous-oxide more than any agent requires for its administration one experienced in its use. In fact its great safety is due to,

and is safe-guarded by the fact that it is not an agent that the novice can successfully use. In the hands of the inexperienced, nitrous-oxide, used for whatever purpose, is decidedly dangerous. I believe that its administration should always be in skilled hands. It would seem that, in the average normal labor of a primipara, say—for here we have a parturient period comparatively long, and in a patient to whom the experience is new, the best and most satisfactory technique is the individual pain administration, and this may be begun as early in the second stage as may be indicated, or even in the latter part of the first stage. It were better to wait, however, until the pains become sufficiently severe and frequent to be markedly complained of. At the first suggestion of a contraction the inhaler is adjusted, and the patient instructed to take a few full, deep breaths. It must be seen to that the mixture is sufficiently rich in oxygen to prevent cyanosis and jactitation. As the effect of the gas is so transient, and as its elimination is accomplished almost immediately upon its withdrawal, the inhalation must continue, of course, so long as any analgesic effect is desired. At the completion of the pain, it may be withdrawn. In the later stages, when the head is down on the perineum, and during the actual delivery of head and shoulders i. e., assuming a normal case, during the last few pains, the patient may be carried on beyond analgesia, to a light anesthesia, from which she awakens gratefully to find that all is over. The anesthesia may be continued here until the placenta is delivered, and the perineum repaired if necessary.

CONCLUSIONS.

(1). Nitrous-oxide is the safest and best agent for producing analgesia or anesthesia in labor.

(2). It has no cumulative action, is under the complete control of the administrator at all times, has no untoward effect on lung, heart or kidney, and is immediately eliminated upon withdrawal.

(3). The depth of its action can be readily controlled, and any degree from a light analgesia to a true anesthesia can be quickly produced at will, and *an analgesia may be maintained as such indefinitely*; it does not merge into a deep anesthesia unless the diluent, and pure oxygen has preference over the air; is diminished, thereby concentrating the nitrous-oxide. If version, forceps, or any operative procedure becomes necessary, the analgesia may be merged into anesthesia, which ordinarily may be continued indefinitely.

(4). There is no danger to the child if the gas is in the hands of one expert in its use.

The above is briefly the consensus of opin-

ion on this question. The use of nitrous-oxide in obstetrics is quite new, but the method seems to be meeting with universal approval, where tried out by men with the ability and the facilities to reach conclusions really worth while. This much is certain: The demand for a comparatively painless labor is becoming insistent, and it behooves us at least to investigate the "American Twilight Sleep." Obstetrician and anesthetist may here work out—and I believe have worked out—the method of painless childbirth more nearly approaching the ideal than any other.

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DISCUSSION.

Edward Speidel, Louisville: Dr. Long has touched upon the obstetrical feature of nitrous oxid and oxygen anesthesia. As we all know, there is a wave passing over the country at present of analgesia in labor. I am of the opinion, of course, that women deserve this analgesia in labor. There is no more reason why a woman should go through the throes of labor without having relief than a surgical operation should be performed without relief from pain. The question is, in what manner can we give this relief with the greatest safety? The experiment of twilight sleep is being tried out in the country by one set of investigators, and the newest thing is American twilight sleep brought before us by Dr. Long. This in the opinion of all of us who are doing obstetrics is a measure which is not applicable to the ordinary obstetrical case, conducted in the private home, and these things will gradually be boiled down in such a way that we can give a woman relief in the throes of labor. The women themselves are the ones that work most against our efforts to do something for them. It is difficult for a doctor to mention this subject, but fortunately a woman herself has brought this thing before the laity by means of a magazine article. I refer to the magazine article published in McClure's Magazine for May entitled, "Safety First for the Mother," in which the writer brings out the point rather lucidly, that as long as women will spend a great deal of time and fifty dollars for getting up a baby basket, and run around

town until they find a doctor who will deliver them for twelve dollars, so long will they have inefficient obstetrics. We can all understand that if the surgeon only receives ten dollars for a case of appendectomy, surgery would not be upon the high plane at which it is at present. If obstetricians got the proper fees for their work, I am satisfied then we could give women painless labors by the most successful and most safe method that will be devised in a short time.

W. Hamilton Long, (Closing): I wish to thank Dr. Speidel for his remarks. I am sorry we did not get some of the anesthetists to do some talking on this subject. I hope soon to have a few cases of my own of nitrous oxid analgesia in labor to report. I am conducting a series of cases, but the number is as yet so small that I thought I would not make any report of any kind on them. If I am fortunate, within two or three months I hope to give you a report of enough cases to allow me to form some opinions of my own in the matter. As it is, the opinions of the men who have done most of this work, both obstetricians and anesthetists, are all very favorable. Unfortunately the additional expense will always keep this boon from a very large number, by far the majority, of our women. In the large cities, however, where an ever increasing number of the moderately well-to-do are delivered in modernly equipped hospitals, we may confidently expect to see this method gain in popularity. It certainly presents marked advantages over any other method of so-called "Painless Childbirth."

Copper Sulphate in Treatment of Cancer.—

Manara gives a number of views of the microscopic findings in a case of cancer of the cervix in a woman of 49. They show the varying aspect of the pus and scrapings from the cancer during a course of copper sulphate treatment, with final cure and no signs of recurrence during the months that have elapsed since. The woman had refused an operation and treatment was merely a daily intramuscular injection in the buttocks of a 1 per cent. solution of ammoniacal copper sulphate in distilled water. He relates that the glycogen in the neoplasm transforms the copper sulphate reaching it, into copper oxid. Under the caustic action of this copper oxid the cancer tissues swell and break down into an amorphous mass. This arrests the growth of the cancer which thus becomes transformed into an afebrile, mild inflammatory process which gradually heals. The course of these changes can be traced in the microscopic findings reproduced in the typical cases reported, all of which confirms his previous announcements on the subject. Cancer elsewhere than in the uterus is less protected against injury from without or from digestive juices, etc., so to date he commends the copper sulphate treatment only for uterine cancers.

THE PRESENT STATUS OF THE SURGICAL TREATMENT OF GOITER.*

By JOHN R. WATHEN, Louisville.

In an effort to summarize our knowledge of the diseases of the thyroid gland, of interest not only to the surgeon and the internist, but also the physiologist and the pathologist, the writer appreciates the fact that in the limited time allowed only a brief resume of the field is possible.

The data from which these observations are drawn are the most recent reports from the large goiter clinics of this country and Europe, as well as our own personal experience of several hundred operated cases.

Goiter is a general term applied to the various forms of enlargement of the thyroid gland. In recent years much attention has been given to the ductless glands, and the thyroid undoubtedly plays a part in the correlation of the internal secretions of the other ductless glands such as the adrenals, the pituitary, the thymus and the ovaries. Likewise the parathyroids, four small glands lying behind the thyroid, belong to the same class and their physiology and pathology is still clouded in mystery.

Under the term goiter we will leave out of consideration such comparatively rare diseases of the thyroid as tuberculosis, syphilis, carcinoma and sarcoma. Plummer has given, in all probability, the only classification of goiters which will stand the test of the clinician, the surgeon and the pathologist, when he divided goiters into four great groups, the non-hyperplastic atoxic, the non-hyperplastic toxic, the hyperplastic atoxic and the hyperplastic toxic.

1. In the first group, the non-hyperplastic atoxic or the commonly called simple goiters or adenomas, are those where no constitutional symptoms are to be traced direct to the enlarged thyroid, and in these we have a class of patients who are suffering only from pressure of the tumor upon the structures in the neck, especially the trachea, and also are complaining of the deformity caused by the enlargement of the thyroid gland. These goiters are quite common in this country as well as in Europe, with the difference that in certain parts of Europe, as in the Swiss mountains, the goiters are endemic and the water supply has been considered the etiological factor in their production; while in America they seem to be pretty generally scattered over wide territories and show little or no relation to water or food supplies as factors in their causation.

A more recent view as to their etiology is

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that advanced by McGarrison, Marine, Lane and others that there is a specific toxic agent in the gastro-intestinal tract, especially the large bowel. These simple types of goiters may be symmetrical or nodular in shape, and are best described as cystadenoma, and most often involve both lobes, the larger part usually on the right side.

2. In the second group, the non-hyperplastic toxic goiters, we have a most interesting class associated with marked degenerative changes in other organs, more especially the cardio-vascular system. This is the group of goiters which until recently, due to the excellent work of Plummer, Kocher and others, was erroneously diagnosed as the exophthalmic type and commonly called Graves' or Basedow's disease.

Kocher has demonstrated that these types can be produced from the simple goiters by the prolonged administration of iodine and he has termed them the "iodine heart cases." Nevertheless, they occur in cases independent of iodine treatment. Plummer says they are quite a distinct group from the exophthalmic type, and that the actual serious injury to the cardiac muscle is much more marked than in the true exophthalmic types.

The continual absorption of the toxin does not allow the patient to show signs of improvement or a return to normal as is often seen in true cases of Graves' disease, but this poison continues to act as in chronic alcoholism.

In this group the patients notice the appearance of the goiter at about twenty-two years of age and their first symptoms of intoxication at about thirty-six years, while in the exophthalmic goiters the patients show the tumor and symptoms at from twenty-five to thirty-five years—about thirty-two years on the average—the symptoms appearing only a few months after the first evidence of goiter.

This group is the most dangerous of all the types of goiter, and little benefit seems to result from preparatory treatment, even the ligation of the vessels at the upper poles is not often followed by good results. Success only follows an early and wide removal of the diseased gland before too great damage has been done to the heart, kidneys and other organs.

3. In the third group, the hyperplastic atoxic thyroids, we have the extreme rarity of a marked hyperplasia not producing toxic symptoms and this group comprises a very small and insignificant number.

4. In the last or fourth great group we have the type of goiter so often met with in this country, the exophthalmic type, commonly called Graves' or Basedow's disease. Balfour has well expressed our present conception of this type when he says: "There is no disease of such a definitely toxic character about which more has been written and less

actually learned than exophthalmic goiter. A definition based upon our present knowledge should be that it is a disease practically always associated with hyperplasia of the parenchyma of the thyroid, and manifesting itself by a symptom-complex, suggestive of a toxin which acts particularly on the nervous, cardiovascular and digestive systems and disturbs normal metabolism."

Typical exophthalmic goiter is always associated with hyperplasia and hypertrophy of the thyroid gland, and the degree of intoxication is generally proportionate to the extent of the hyperplasia.

As to the real cause of Graves' disease there is much diversity of opinion, but the view held by Kocher, Mayo and others is that the primary trouble begins in the thyroid and the other organs affected are secondary.

On the other hand Crile does not accept that hypothesis and advances his Kinetic theory which closely connects the nervous system with its production. Crile believes it to be "a disease of the motor mechanism that causes physical action and expresses the emotions; its origin is the phylogeny and its excitation is through some stimulating emotion intensely or repeatedly given, or some lowering of the threshold of the nerve receptors, thus establishing a pathologic interaction between brain and thyroid."

The writer's opinion as to the true cause of typical exophthalmic goiter is that grief, fright or worry has preceded the development of the first symptoms. This opinion has been reached after a careful study of the histories of a large number of operated patients.

Nevertheless, the true etiology of exophthalmic goiter is still under discussion, but undoubtedly the physiologist and the pathologist will soon produce experimental evidence to clearly define the cause of this affection.

Wilson seems to think that there is little or no speculation as to the factors which lead to the definite pathologic changes which uniformly occur in exophthalmic goiter, and states that the relationship of primary hypertrophy and hyperplasia of the parenchyma of the thyroid to true exophthalmic goiter is as direct and as constant as is primary inflammation of the kidney to the symptoms of true Bright's disease.

The most important symptoms which lead to a diagnosis of exophthalmic goiter according to Plummer are: (1) cerebral stimulation; (2) vasomotor disturbances of the skin; (3) tremor; (4) mental irritability; (5) tachycardia; (6) loss of strength (weight); (7) cardiac insufficiency; (8) exophthalmos; (9) diarrhea; (10) vomiting; (11) mental depression; (12) jaundice; (13) death.

Although the etiology and pathology are

still mooted questions, we are indeed fortunate that the diagnosis is comparatively easy, and the results of treatment by operation in well selected cases, in the hands of men of experience, are the most brilliant and gratifying of any surgical procedures. Any enlargement of the thyroid gland usually produces an accelerated pulse rate, some nervous symptoms, and the neck fullness causes a sensation of choking or smothering. It is especially in the exophthalmic type of goiter and the non-hyperplastic toxic goiters that the pulse remains greatly accelerated and the other symptoms are most prominent.

The diagnosis of the cystic types is comparatively easy, as they are usually round, protruding and generally freely movable. Some attain a very large size. Of course exophthalmic symptoms from hyperplastic changes, are very liable to occur in these, and their early removal should be insisted upon as the results of operation are good.

The exophthalmic goiters are easy to diagnose in the late stages after all the typical symptoms have developed and much irreparable damage has been done, but to make an early diagnosis is sometimes extremely difficult. Often the thyroid gland is so slightly enlarged that it has been overlooked by the physician treating the case, and the patient has been treated for almost every disease except the real trouble.

What are the indications for treatment after our diagnosis has been made? They should be given first, rest, and by that is to be understood a real rest in the fullest sense of the term, i.e. avoidance of all excessive exercise, or excitement and a life of quiet and ease.

It has been clearly demonstrated by the Kochers that iodine not only does no good, but may be very harmful in that it may stimulate an adenomatous or cystic goiter to become the exophthalmic type. Likewise all preparations of thyroid are contraindicated. Electricity is of no value and tends to excite an already overnervous patient.

I formerly believed that a larger percentage of these cases were cured by this treatment, but as my experience has ripened and I have had better opportunities for studying Graves' disease, I am now firmly convinced that what has occurred under non-surgical treatment has been that the acute symptoms have subsided and we have a temporary stage of quiescence.

True the size of the tumor has apparently diminished, but upon operation later, we are surprised that even this is not true, as what has really occurred is that the long continued pressure has absorbed the fat layers of the neck, caused an atrophy of the muscles, etc., and the tumor has sunk deeper into the folds of the neck.

This is an apparent reduction of the size, the fallacy of which I have demonstrated at the operating table, and in this connection let me say to those surgeons undertaking the operation, that these are the most difficult of all goiters to remove and the most liable to cause the recurrent laryngeal nerve to be injured, with resultant voice paralysis. True that some cases have shown signs of improvement under medical treatment, but this has been proved to occur independent of any treatment whatsoever; in fact, they often do best if kept quiet and given no medicine at all.

The serum of Rogers and Beebe which a few years ago attracted so much attention, has fallen into disuse, and even Rogers in a late paper states that the use of antiserum was not satisfactory except in the early and the uncomplicated cases of hyperthyroidism; and especially in the rare instances of early acute toxemic hyperthyroidism. I personally know of no case that it has permanently cured and I am quite sure it has delayed cases for surgery until too late.

Based upon a comparatively large experience of several hundred cases, I should say that if we delay operation for years, administering iodine and electricity until the heart muscle has undergone degeneration, albumen in the urine, enlargement and fatty degeneration of the liver, lowered blood pressure, etc., we have waited too long to attempt any radical operative measure and these patients will generally die. The proper time to advise operation with the expectation of a low mortality and good results, is often a different problem and requires very careful and experienced judgment. Likewise the selection of the type of operation and the technique employed, whether merely a pole ligation or a radical excision, are of paramount importance.

Patients are often referred to the surgeon in a moribund condition, after they have been under the care of their family physician for several years, and these are the cases which will bring surgery into disrepute as it has done in other lines such as delayed cases of cancer of the breast, uterus, etc. As a rule the surgical treatment of exophthalmic goiter is never an emergency operation and during acute exacerbations should be let alone. The mental or psychic is, according to Plummer, a most valuable indication of what the patient is able to undergo in operative work. Crile has also laid special emphasis on this same observation.

We will not consume time in a description of the various types and technique employed in the surgical treatment of goiter, but only say that we are at present doing more pole ligations and partial resections of lobes, after

the method of Von Michuliez, than the older and more radical operations of Kocher where he removed an entire lobe and sometimes part of another. In the early cases, pole ligations under local anesthesia usually accomplish all that could be required.

The Von Michuliez resection of a part of each lobe and division of the isthmus, leaves the gland in nearly its normal condition and certainly adds to the cosmetic effect compared with the older method of Kocher where a complete lobe on one side was removed.

The older operation of thyroidectomy or lobectomy after the method of Kocher, has been the one generally employed by most goiter operators until recently, the only exception to the original Kocher technique in thyroidectomy being the method suggested by the writer of elevating the enlarged lobe with vulsellum forceps in order to produce traction for the control of venous hemorrhage and allow better access to the vessels on the under side, so as to avoid injury to the recurrent laryngeal nerve.

The removal of the thyroid gland in late cases is useless, as the real damage has been done to the other organs and it is too late to expect much repair. Likewise the supposed cures by medicine occur only after the thyroid has exhausted itself of its poison and damaged to its limit the heart, liver, etc.

It is little short of marvelous how in a few days after operation the heart beat will drop from 140 or more to normal. Of course in cases of long standing with a badly damaged myocardium, so great an improvement cannot be expected. The exophthalmos usually shows a slower improvement, and the skin, hair and menstrual irregularities gradually change for the better.

The mental or morbid psychic state is the earliest to disappear. Digestion soon improves and the muscular power returns early. In cases of long standing these changes for the better are slower to make their appearance and in the very worse cases we should expect but little improvement.

Compared with other surgical cases, the immediate and remote results of operation, in the hands of the experienced can offer as good or better results than most other surgical conditions.

All the patients operated upon by me and who left the hospital as cured, have remained cured or greatly benefited, the latter class being of course the cases seen late in the progress of the disease. No case has since died from symptoms like Graves' disease.

In my earlier work, and in the work of the other few doing a large number of goiter operations, there were a few cases where when one lobe was removed, the other subsequently enlarged and required a secondary operation.

Fortunately I have since learned to prevent such an occurrence and no case in the last two years has returned for a secondary operation for this condition. It can be prevented if the other lobe is slightly enlarged by doing a superior pole ligation; and if the lobe is fairly enlarged by employing the partial resection method of Von Michuliez above mentioned.

We consider our patients as cured if they can undergo nervous shock like grief, worry or fright, with no more excitement than a normal individual.

It has been variously estimated that from 75 to 83 per cent. of those operated upon have obtained a symptomatic cure, while the remaining others are greatly benefitted. These statistics compare most favorably with any other surgical procedure. While only a few years ago the mortality for operations on exophthalmic cases was 25 per cent., it has now been reduced to about 2 or 3 per cent. One clinic reporting 275 consecutive operations without a death. This has all been brought about by a better selection of patients for operations and improvements in technique.

Whatever the physician's opinion may be as to the cure of goiter by operation, there at no time remains any doubt in the mind of the cured patient concerning the results obtained by surgery compared to medical treatment.

There are no stronger advocates of the surgical treatment or more grateful patients than the cured cases, and the great majority of these have had the benefit of long medical treatment before they applied for surgery.

DISCUSSION.

John B. Murphy, Chicago: I have been very much interested in and instructed by the very able presentation of Dr. Wathen on the surgical treatment of goiter. In the first place, he simplifies the pathology. Second, he simplifies the differential diagnosis of those cases that demand primary, immediate and early action from those that may have a postponement. Third, he accentuates the danger of the apparently innocent type of goiter in its early stage, that it may subsequently become a serious menace to the patient. Fourth, he has given us the details of a technic that, I am sure, will relieve us of anxiety in a considerable number of cases.

The emphasis which he has placed on the aplasic small goiter, with toxic symptoms, is the one that needs most attention, because it is the one not recognized or treated in its early stage, and it is soon recognized as an etiologic factor of a very serious train of symptoms involving the cardio-vascular and nervous system. Many patients are treated for weeks and months for heart lesions and brain lesions, and neurasthenia and all other sorts of things, than the primary lesion in the thyroid gland which is unrecognized.

Again, he accentuates the fact that early recognition of the exophthalmos is not sufficient. It is only recognized by the profession generally except when the classical symptoms are present, but there is a stage preceding the exophthalmos, preceding all manifestations of a tumor in the neck, and I refer to the stage of nervous irritability, the stage of muscular tremor, the stage occasionally of tachycardia, all tending to produce serious changes in organs that cannot be repaired when the goiter is removed, as an exophthalmic goiter, when the gross manifestations appear. It seems to me, that in our profession, as was accentuated concerning the functions of the State Board of Health, that it is not enough for us to know, but it is essential that we should act, before irremediable damage has occurred. With the splendid statistics of the present time in exophthalmic goiter, and the aplasic toxic type; when the statistics are perfected to the degree they are now, it would seem to me that we should have a similar number of superlative cases appearing at our clinic for operation, and should have a smaller number of deaths after or before leaving the train from the exophthalmic cases, and that we should recognize there is, aside from the hyperthyroid cases, a considerable number of hyperthyroid type, some with enlarged glands, some with no glands at all, which go on to the grave without a recognition of the fact that it is the hypothyroid type of lesion. I thank you. (Applause).

J. Garland Sherrill, Louisville: Dr. Wathen has given us a very able presentation of this subject, and the remarks of Dr. Murphy were very pertinent. It requires judgment to determine just when to attack the thyroid gland. Undoubtedly, in the early stages of the toxic thyroid and in the large atoxic varieties operation should be employed. In the very early stages, however, of a simple goiter, I am firmly of the opinion that many of these cases will get well under simple treatment without operative interference. At the same time we must recognize the fact that these simple goiters may undergo a change into the exophthalmic type at any time. We do know, however, notwithstanding the fact that many of these exophthalmic cases die, some undergo retrogression and become simple goiters, and when they reach such a stage they are probably harmless. Personally, I am strongly of the opinion held by McCarrison, that goiter is a toxic disease, and that the toxic material enters through the intestinal tract and is usually carried in the water supply. McCarrison made a series of experiments in which he gave water from a well-known goitrous well in India to a certain number of healthy young men, and in each individual instance it increased the size of the gland and increased the size of the neck. He tried the same experiment on himself with the same results. He stopped the drinking of this water and the pa-

tients all improved, and finally the enlargement subsided. Whether or not there is a chemical substance in the water that produces the disease, or whether it is due to bacterial infection, is a question that is debatable. It is a question whether the water carries a bacterium which is toxic to the human organism, the toxemia being manifested in the thyroid and also in the system as a result of the over-production of the thyroid secretion. Along these lines I think we will undoubtedly find a great advance in the next few years. We expect by the aid of the laboratory men to establish the fact whether this is a true contention or not.

The operation for goiter has been so much simplified in the last ten years that it can be done with comparative safety. The technic of Dr. Wathen is that in the main which is employed by the great majority of surgeons throughout the country. I wish to emphasize what he says about traction upon the structures in controlling hemorrhage. Too much manipulation of the gland is hurtful to these patients because we may express a certain amount of material that is surely toxic from the gland structure into the cellular spaces, and thus produce a hyperpyrexia and a marked cardiac depression after the operation is finished. In operating the surgeon should be careful to make traction in such a way that none of this material is extruded into the spaces, and in that way avoid a marked toxemia which sometimes follows the operation.

C. B. Spalding, Louisville: I enjoyed Dr. Wathen's paper very much. To the anatomist and physiologist and the surgeon, it seems to me that there is no one organ in the entire anatomy that offers more for consideration. When we consider it is an organ situated back of the sterno-thyroid and sterno-hyoid muscle, riding astride the trachea, and attached to the cricoid and thyroid cartilages, situated directly above the recurrent laryngeal nerve and common carotid artery, which varies so much in anatomical peculiarity from the angle of the jaws down to the clavicle, we certainly have an organ that is rich in its boundary lines of anatomy. There has been sufficient work done to give us an idea of the limitations and possibilities, and that is quite a good deal more than was done up to the last few years. I think the kinetic theory of Dr. Crile is sufficient to give us a working basis at least, surgically. I think that the technic of the operation has been greatly added to by Dr. Wathen's ideas he has given us here, and also by the anoci-association of Dr. Crile, which is one of the largest features in the removal of the exophthalmic type of goiter, particularly in the hands of men who use anoci-association. In the hands of men who use it occasionally it may not be of any consequence. The technic as practiced by Dr. Wathen, which I have seen carried out time and again, simplifies the operation very

greatly. It lifts away the organ from all the surrounding tissue—nerves, blood vessels, muscles, and so forth,—and renders it so that you can see everything you touch. It is not a question of grabbing the tissues for you are enabled to see the blood vessel itself lying out there.

In regard to the parathyroids, situated as they are about the blood supply above and below, sometimes inside the capsule, but generally outside the capsule; if we will elevate the gland in this way and lift it from the capsule, we assure ourselves that we will not damage these vital structures.

Just a word in conclusion. There are three or four things that are absolutely essential if we wish to do good work in this line, or in any surgery for that matter. First, is the proper and thorough conditioning of the patient. It seems to me, these cases are not emergencies like appendiceal abscess. We must have the patient in a proper condition. If a horse has just run himself to death, you would not have him run another race. If a patient's pulse has gone all to pieces, you would not think of operating on him then. In the second place, a thorough working knowledge of anatomy is absolutely essential, especially in this line, as it should be in every line of surgery. We see cutters and sewers without a working knowledge of anatomy, but the anatomist should know the structures as they lie in their relations. A thorough working knowledge of anatomy in contradistinction to a theoretical knowledge is absolutely essential. The theoretical anatomist lacks that something we are inclined to call surgical sense, with which the operation is rendered easy in this type or any other type of operation.

W. I. Hume, Louisville: My association with Dr. Wathen in his work for the past few years has naturally led to a special interest in this subject and has given me an excellent opportunity to study these cases before, at and after operation.

This operative field is a difficult one, requiring as it does the mastery of a difficult technic, experienced judgment and a high order of surgical skill.

There should be no mortality in the surgical treatment of simple goiters or of the early, milder cases of the toxic types. We find our partial cures and our mortality in the acutely toxic or in the very late cases. In handling cases of this latter group, it has been impressed upon me that greater care should be exercised in the selection of cases for operation and in suiting the operative procedure to the case.

In our experience a patient whose pulse cannot by appropriate preparatory treatment be reduced to within the neighborhood of 100, is a dangerous surgical risk. In this connection I may say that, except when ligation is done as a preparatory step to a more radical operation, the only

treatment we have found to be of any practical value is the administration of fresh tincture of strophanthus three times a day with quiet and rest in bed. Other remedies have been discarded.

Some cases show an irregular intermitting pulse. These are always to be considered dangerous risks. They respond, as a rule, very little to preliminary treatment.

Then, in the exophthalmic type, we have at times, acute exacerbations of the disease followed by remissions. These crises, as has been said occur independent of treatment and to operate during the rapid increase of the symptoms of intoxication is to invite disaster in the form of acute hyperthyroidism and death from dilation of the heart.

As to the choice of operative procedure for a given case, there will often be a difference of opinion. I am convinced that if more and earlier ligation of one or both superior poles were done, many patients would never require the more radical and dangerous operations.

Ligation is to be recommended, too, in some cases as a step preliminary to radical operation. If no acute intoxication follows this procedure the patient will probably withstand the radical operation and this is usually done about one week later; if we do have symptoms of hyperthyroidism after ligation, we must postpone the radical operation until the improvement which always follows ligation is at its maximum.

In the simple adenomas I strongly favor double resection as advocated by Von Mikulicz. These patients complain only of pressure symptoms and deformity and this operation frees the parts from pressure and leaves less deformity than any other adequate surgical treatment.

I want to say in conclusion that I heartily favor the technic employed by Dr. Wathen. To my way of thinking it has two strong points of advantage over other methods—hemorrhage is more easily controlled and time can be saved. The upward handling of the tumor with the volsellum forceps removes the field of work the greatest possible distance from the region of the recurrent laryngeal nerve, allows the clamping of vessels by direct observation and by keeping the parts on a stretch lessens venous bleeding and altogether greatly facilitates the dissection. And, I may add, often relieves the anesthetist of some anxiety by removing pressure from the trachea.

The friends of Dr. T. L. Bacon, of Hopkinsville, will hear with pleasure that while he is confined to his room by reason of a slight paralytic stroke sometime since, that he is enjoying freedom from pain and enjoying reasonable health for one of his advanced age.

SURGERY OF THE INFECTED HAND.*

By W. L. GAMBILL, Jenkins.

The numerous and various tasks imposed upon the hand by its possessor, and its exposed position subject it especially to traumatism and infection. That nature has endowed it with wonderful power of resistance to infection and remarkable power of regeneration from severe traumatism is no less true. It is not the purpose of the writer to attempt to add anything new to the literature upon this subject, but rather to review it, and call attention to some of the more important points in the successful management of these cases.

It is essential for a proper understanding of the pathology and treatment, that we review a few practical points in the anatomy of the hand.

Anatomy. The connective tissue fibres in the distal phalanges are closely connected with the integument and matrix of the nail. These fibres converge centrally and are connected to the tendon-sheath and periosteum. They are arranged in bundles, the spaces between which being filled with fat. The lymph channels follow the direction of the fibres from the integument toward the bone.

The epithelium of the back of the distal phalanges is folded in upon itself and thickened. This double layer of actively multiplying cells reaches nearly to the terminal joint, and is called the matrix of the nail. The lower part of the matrix is thicker than the upper and forms the greater part of the nail. The distal edge of the underlying part of the matrix forms the whitish semilunar line visible in most fingers.

The tendon-sheaths of the ring, index, and middle fingers terminate in blind extremities near the metacarpo-phalangeal articulations, while those of the little finger and thumb are continuous with the large synovial sac beneath the palmar fascia. The long flexor tendon is attached to the base of the distal phalanx. The superficial palmar arch is situated above a line drawn transversely from the web of the thumb, the deep palmar lies one-half inch nearer the carpus.

The form and extent of the inflammatory process are determined by (1) the nature of the wound; (2) the anatomical structure of the part; (3) the resisting powers of the individual; (4) the nature of the introduced germs.

The active agent in the infections which we shall mention is the staphylococcus, or streptococcus, or both. Warren calls attention to the peptonizing action of the staphylococcus, which causes a ready liquification of the in-

flamed tissues into a local abscess. Since, under such circumstances, the germ is not ordinarily long-lived, this form of infection is less formidable than the more resistant streptococcus, which has much greater invasive tendency, but with far less power to soften the area of coagulation necrosis into pus. The grafting of a streptococcus upon a staphylococcus infection would give a spreading character to the inflammation and render it more obstinate, while adding the staphylococcus to the extensive infiltration of the streptococcus would cause a rapid melting of the infected tissues and great additional damages. This is seen not infrequently in an infection of the hand extending along the lymphatics of either the flexor or extensor surface of the arm as a cellulitis. The most frequent site of infection is the palmar surface of the terminal phalanges, but it is not uncommon among certain classes of working men, especially miners, to get an infection in any of the phalanges, as well as upon the palmar and dorsal surfaces of the hand. Infection in the latter position is attended with far less gravity and does not differ materially from infections in other parts of the body.

While many names have been theoretically given to the different infections in the hand, the writer prefers to classify them for simplicity and purpose of treatment into two forms, the superficial and the deep.

The superficial variety may attack the skin alone, forming a purulent blister only, or it may involve the subcutaneous tissues like a boil. It may involve one finger or several in succession or at the same time, as is often the case in children and debilitated subjects, and located generally around and under the nail. According to Foote, the pus may be located in any one or more of four spaces. (1) The space between the dorsal skin and the matrix. (2) the space between the matrix and the formed nail. (3) the space between the formed nail and underlying skin. (4) the space between the skin and underlying phalanx at front or the side of the digit. The pus-organisms obtain entrance by means of an abrasion, a puncture or hang-nail. The symptoms are those of an ordinary cellulitis. The pain is pulsatile in character and more or less intense; is increased by motion, pressure or a dependent position; the skin takes on a dusky red appearance; the swelling is slight.

In the deep variety the tendon sheaths may become infected, or even the periosteum, resulting in necrosis of the bone. The perpendicular arrangement of the subcutaneous fibers, as previously described, seem to direct the process to the deeper parts; while the tendon-sheaths, lymphatics, and even the veins may carry it into the palm of the hand, the

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forearm, or the lymph nodes of the elbow or axilla. In this variety the pain is agonizing, entirely preventing sleep, pulsatile in character; the finger is enormously swollen, and constitutional symptoms rapidly supervene if tension is not reduced by incision. Gangrene and even general sepsis may result.

If the infection invades the tissues beneath the palmar fascia an abscess results, and the situation at once takes on a grave aspect. While a palmar abscess most often originates from an infection in the fingers, especially the little finger and thumb (owing to a continuity of their tendon-sheaths with the palm), they may result more directly from injuries, blisters, cracks in the skin, or from inflammation in connection with callosities of the palm. The local and general symptoms are quite severe. The hand swells enormously, including the back of the hand and fingers, which become more widely separated, flexed and immovable. The pain is intense and throbbing in character. Pus may burrow through between the bones to the dorsum of the hand or extend along the tendon sheaths into the forearm. Redness of the skin does not appear early owing to the depth of the inflammatory process, and therefore, the diagnosis must be made from the history, pain, swelling, and the constitutional symptoms.

Prognosis and Treatment. While the nature and location of the infection, as well as the resistance of the patient, influence the ultimate result, by far the greatest factor is judicious treatment which will insure a good result in practically all cases if instituted early. Neglected cases of the severer forms of infection invariably result disastrously. This neglect may be due to the patient himself or to improper treatment and lack of care by the surgeon.

To illustrate the results obtained in the two instances, the writer desires to report two cases of infection in the palm, which occurred only a short time ago in the same family. The first patient, a woman, age 40 years, general condition of health good, reported to our office for treatment of an infection in distal portion of palm back of first phalanx of ring finger. Part was exquisitely tender to the touch; moderate swelling existed; complained of pain, pulsatile in character, and greatly exaggerated by dependent position. Incision was advised. Patient refused, returned home and resorted to the old fad—a flax-seed poultice. About four days later we were called to her home and found her with temperature of 103 degrees F., hand swollen enormously, as was the entire arm, had suffered a chill in the early part of the day. She then consented to being removed to the hospital where, under general anesthesia, two incisions 1-1.4 inches long were made in the palm, one extending

through between metacarpal bones to the dorsum. As the pus had burrowed upward beneath the anterior annular ligament into the forearm, a third incision was made in the wrist. Wounds irrigated with sherry-red solution of iodine and drained. Would scarcely consent to after treatment, which accordingly was not carried out thoroughly. Would not permit passive motion later. Result stiffness in fixed position of all the fingers, dusky red, glazed condition of palm and wrist.

Second patient, a daughter of the first reported for treatment for beginning infection about one week later. Incision was made at once, wound drained by gutta-percha strip, patient well in one week with perfect hand.

These two cases are mentioned to emphasize the importance of relief of tension by early incision. After a quite extensive experience in contract practice including thousands of laborers, we advise incision only as the abortive and curative treatment in practically all cases, disregarding entirely poultices and hot fomentations. The usefulness of the hand to one who toils, the ability to obtain sustenance for the wife and little children, plead in terms most eloquent for early, prompt and permanent relief. Infections of the fingers can be incised under local anesthetic, ethyl chloride spray or application of ice and salt, followed by injection of cocaine or codrenin. The incision at tip of the finger can be made to the bone if necessary without danger of opening tendon sheath. The incision should not be carried below level of infected area, and Esmarch bandage used above point of infection. In making incisions in the palm, one should avoid the branches of the median nerve and also remember to make the incision below the location, if possible, of the palmar arches. The use of moist, mild antiseptic dressings is recommended in all acute suppurations. Passive motion should be used in all cases where tendon sheath is involved and in palmar abscess. For disinfecting the field of operation following injuries of the hand, it is our custom to use two solutions: No. 1, consists of one part of iodine crystals to 1000 parts of benzine; No. 2, consists of tincture iodine, U. S. P. diluted one-half with alcohol. No water is used, and while these solutions are used to sterilize the field of operation in all cases, they are especially beneficial in cases of hand injuries in those working in mines or machinery where hands are covered with grease and dirt. The first solution is allowed to dry thoroughly before the second is applied. In conclusion, we would most earnestly plead for conservatism in injuries of the hand. Never amputate a finger or mutilate the hand, even after loss of bone, until every effort has been made to save it. The results that can be obtained are truly remarkable.

Summary. The points we desire to emphasize are:

1. The power of resistance to infection and regeneration after traumatism.
2. The greater dangers of infections of the little finger and thumb, than of other fingers.
3. The necessity for early puncture or incision in practically all cases with adequate drainage in abscess cases.
4. The use of iodine solution for irrigation followed by moist, mild antiseptic dressing.
5. The disastrous results obtained in neglected or improperly treated cases.
6. The use of iodine-benzine solution No. 1, and 3.5 per cent. solution iodine No. 2, as disinfectant in operations on the hand, with avoidance of water.
7. The importance of conservatism in injuries of the hand.
8. The use of a general anesthesia in operation for palmar abscess, with local anesthesia produced by ethyl chloride, followed by codrenin in less severe infections of fingers.
9. The avoidance of severing the branches of the median nerve and palmar arches, and also of carrying the incision into non-infected areas.

DISCUSSION.

J. G. Carpenter, Stanford: I am much gratified in having heard this most excellent paper. It is up-to-date, and shows that the author is on the way to make a great surgeon. There is nothing so important as rest for the wounded hand, and early incision. Early incision and drainage will save the hand and fingers, but a good deal will depend upon the kind of infection. If we have a staphylococcal infection, we have the laudable pus of Gross. It is circumscribed. By means of early incision you can evacuate the pus, and with a little antiseptic dressing applied, the patient soon recovers. But when you have a streptococcal infection, or when you have an erysipelatos case, it is a serious matter indeed, so far as it concerns the member, and even the life of the patient. We have various pathological conditions, such as a lymphangitis, phlebitis, thecitis, myositis or a periostitis, rest, abundant antiseptics, free incision or incisions if necessary must be done or the traumatism may be so severe as to produce osteomyelitis. In that case, as Dr. Murphy has said, incision should be made early, with trephining of the bone within the first twelve or twenty-four hours when the first drop of pus has appeared. If you have necrosis there, you want to save all the periosteum. If it is necessary to resect the phalanges or one or more of the metacarpal bones, save the periosteum, and you will have regeneration up to twenty-one or thirty years of age. That has been my experience. Again, after you have used your antiseptics and the knife, you may have contractions, you may have sloughing of the cellular tissue, and it may

be necessary to enucleate the hand freely. I saw a patient with a palmar abscess that broke over the arches of the hand. The doctor who saw the case said it would be necessary to cut one or more of the palmar arches to incise abscess. I took a blunt pointed groove director and introduced it into the wound, made a slit, curetted, used my antiseptics, put the patient at rest, and he made a prompt recovery. But there will be times when you will have contraction of the palmar tissue. You will have contraction of the tendons, and with massage, as the case goes on, bathing in hot and cold water, you may not be able to overcome the contractions, then you must resort to some measure to overcome contraction of the palmar fascia, anaesthesia and forcible flexion and extension, splints and bandages. Again, you must operate for the contracted tendons. Where these tendons are contracted an inch or an inch and a half, you can slit the tendon, do a sliding approximation, and give the patient a useful hand. That I have done more than once.

In tuberculosis of the tendons of the hand, which is an infection, I have been able to remove the tubercular tendon, and then with chromicized catgut make a new tendon, perforating the proximal and distal ends of the sound tendon and putting a guy-rope through each buttonhole, made in the proximal and distal ends of tendon, making a new tendon, and have given the patient a perfect hand with most beautiful results.

W. L. Gambill, (Closing): I have nothing further to add except to thank Dr. Carpenter for his discussion and to again make a plea to the profession for greater care and greater attention being paid to these injuries and infections of the hand. As I have said before, when we consider the importance of the hand, it is our duty to look after it closely. I feel sometimes, that owing to the fact that this surgery is minor surgery, in the mad rush to get into the abdomen, to remove an ovarian cyst or to do a hysterectomy and thereby gain a reputation as a major surgeon, we may overlook these injuries of the hand, and treat the infection too lightly. While it is true, these hand injuries and infections, are in the realm of minor surgery, yet all of us who have had an injury of the hand, especially division of the tendons and nerves of the wrist, and have attempted, as we should attempt to suture these tendons and nerves accurately, and get a perfect result, will admit that it is a more difficult operation, than it is to remove the appendix, and many other pathological conditions found within the abdomen.

DIAGNOSIS AND MEDICAL TREATMENT OF GASTRIC AND DUODENAL ULCERS.*

By JULIAN T. McClymonds, Lexington.

There is no problem of greater interest to the clinician and laboratory worker than that of peptic ulcer, and no condition demands greater care in its diagnosis and treatment. Not alone from the pain and discomfort it causes, danger of perforation and fatal hemorrhage, but also from the fact that cancer of the digestive canal most frequently occurs at the seat of unhealed ulcers. In spite of the great advances made in laboratory methods the diagnosis of peptic ulcer rests to the greatest extent on the history of the case. Laboratory findings and Roentgen examinations in most cases are but confirmatory evidence. While from the clinical standpoint it is not necessary to discuss the many etiologic factors which have been shown to interfere with the blood supply of the mucosa. It is essential to know that ulcers will be produced in any portion of the digestive tube exposed to the action of the gastric juice in which the blood supply has been cut off; that ulcers become chronic when excess of acidity, bacterial infection, mechanical irritation or the lowered vitality of the individual prevents its healing; and that pain is due to the irritation of the nerve ending by the Hcl. of the gastric juice, the passage of food particles, peristaltic action or muscular spasm.

Pain. Pain is the most frequent and characteristic symptom of ulcer and when absent, as in the latent type, the diagnosis of ulcer can be made only by the occurrence of some complication, hemorrhage, perforation, or rarely by the finding of a definite niche in fluoroscopic or plate examination.

While it is probable that the mucosa has no power to register painful impressions, the extension of the inflammation from the eroded area to the lymphatics and peritoneal layers is rapid and these being supplied with a rich nerve distribution both from the sympathetic and the cerebro-spinal system are extremely sensitive to any form of irritation.

That cutaneous and muscular points of tenderness do not correspond to the points directly over the ulcer has been shown by MacKenzie for the epigastric point and by Head for the dorsal points, but correspond to the distribution of the spinal nerves coming from segments of the cord which receive stimuli from the inflamed peritoneum. Head gives the seventh, eighth, and ninth dorsal nerves as most often involved; and states that irritation of the seventh is associated with vomiting

and rapid occurrence of pain on ingestion of food; that in involvement of eighth, pain is delayed one hour or more, while in the ninth, which enervates the duodenum and pylorus, pain comes on much later.

In the examination of patients one is often struck by the frequency with which points of greatest tenderness are met with other than the epigastric point of gastric ulcer or the duodenal point which is somewhat to the right and on the line with the umbilicus, as, for example, where the point of maximum tenderness is well to the left and on or above the umbilical line. This is puzzling until we recall that the area of hyperesthesia may occur at any point in the distribution of the irritated dorsal nerves.

Pain complained of by the patient is usually described as cutting, tearing, burning, gnawing or a feeling of fullness or distention. It may be so mild as to cause little discomfort or may be extremely severe. In the majority of cases it is paroxysmal but may be continuous.

Food and the character of food have a distinct influence on the pain and to some extent the ingestion of food gives us an idea of the seat of the ulcer, thus in ulcer near the cardia or fundus, pain comes on immediately or shortly following a meal, while in those located near the pylorus it usually comes on two or more hours later. In duodenal ulcer there is usually a delay of three or four hours, this often described as the hunger pain, before the maximum is reached, but pain may develop immediately. Also the taking of non-irritating foods or alkalis has marked effect in relief of pain. In most cases the rapidity with which relief is experienced bears a relation to location of ulcer. This is explained by the fact that the diluting or neutralizing of the Hcl of gastric juice lessens the irritation to the exposed nerves. In duodenal ulcer another factor is important and this is probably true in gastric ulcers occurring at the pylorus. Neutralizing the acidity tends to decrease the tension or spasm of the pylorus which is undoubtedly the principal cause of pain in ulcers of this region.

Hemorrhage. It is difficult to give accurate figures for the frequency of hemorrhage. In ulcers of gastric origin the vomiting of blood is seen in about 1-3 of the cases. In ulcer of the duodenum this may occur but is relatively infrequent. There is no doubt that a careful and repeated examination of stools and vomited matter by the chemical tests would show that hemorrhage occurs in a very large percentage of cases. Haematomesis not infrequently occurs from sources other than peptic ulcer, as from trauma, from acute or passive congestion of mucosa, from irritants, or hepatic or heart disease, benign or malign.

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nant tumors, in the course of infectious diseases, in constitutional diseases as hemophilia, purpura scorbutus, leukemia, pernicious or splenic anemia, from rupture of aneurism or varix of the stomach or esophageal vessels, from aneurisms of adjoining vessels breaking into digestive tube or gall stones perforating the stomach or duodenum. Fenwick has described a condition to which he has given the name of gastrotaxia which is characterized by frequent gastric hemorrhages. Hemorrhages from the lungs or upper air passages may be mistaken for gastric hemorrhage but careful examination usually reveals the source.

Vomiting. Vomiting, while more frequent than hemorrhage is absent in more than half the cases and is, as a rule, not persistent. It usually comes on some little time after the development of pain but may occur immediately after taking food, especially in ulcers located near the cardia. Most frequently the vomited matter is acid, causing a burning in the esophagus and mouth but at times shows no trace of acid. As a rule vomiting gives more or less relief to the gastric distress.

The character of the vomited material is often significant as when it contains blood, this being bright red. When the hemorrhage is recent but becomes dark brown or as is often described, of coffee ground appearance when it remains in the stomach for some time, this is due to the action of gastric juice. At times the vomited material is more or less green in color, due to the fact that bile has been regurgitated into the stomach and is acted on by the Hcl of the stomach.

When food is retained for several hours in a hyperacid stomach, the proteids undergo rapid digestion while the starches are practically unchanged. When ulcer has produced stenosis of pylorus and food is retained for considerable length of time searcina and yeast cells are often found but not the bacillus of Oppler-Boas.

Hyperchlohydria. With but few exceptions clinicians hold that an excess of Hcl is of first importance in the formation of chronic ulcer, Ricgal, Boas, and Einhorn, etc., holding this view. Ewald, while admitting its frequency thinks that it is the effect of the ulcer and not its cause, the chief cells being stimulated to the formation of acid by the presence of ulcer. That there are many cases, probably one-fourth, in which Hcl is normal, diminished or entirely absent, is certain.

Hemeter explains this by the exhaustion of the acid production in the cells, by constant stimulation and hypersecretion. We must bear in mind that the degree of acidity can be determined with any degree of accuracy only from test meals; examination of vomited matter may be entirely misleading.

While hyperacidity and hypersecretion are found in the majority of cases of gastric and duodenal ulcer, they are also among the most constant symptoms of other abdominal conditions, as chronic appendicitis, gall bladder conditions, adhesions, pelvic inflammation; etc.

Stools. The examination of stools for blood or occult blood following hemoglobin free meals should not be neglected as positive findings are of great value, bleeding from hemorrhoidal areas, ulcers and other rectal conditions being excluded.

Röntgen Examinations. Fluoroscopic and plate examinations at times give positive evidence of ulcer but they are of greater value in a negative way, that of enabling us in most instances to recognize those cases which should be treated by surgical methods, as by these examinations we can demonstrate pyloric stenosis, hour-glass contractions, and insisurae. These when found persistent after repeated examination and after the administration of anti-spasmodics, as atropin papaverine, etc., can be relieved only by surgical means. The same can be said of perforating ulcer which can usually be recognized. The great majority of cases, however, do not reveal permanent conditions and should be given thorough medical treatment.

Screen examinations are of special service in determining the peristaltic activity, rapidity of emptying, and filling of duodenal cap. We can also under screen examination, by employing deep pressure, often determine points of tenderness with definite relation to abdominal organs.

Differential Diagnosis.—When we read the work of Moynihan on "Duodenal Ulcer" we are told that the differential diagnosis from gastric ulcer very rarely presents great difficulty. This may be to a large extent true of surgical cases but to the general diagnostician this is another matter. Over 80 per cent. of duodenal ulcers occur in the upper part of the duodenum and some 25 per cent. of gastric ulcers at or near the pylorus, and as the subjective symptoms are often precisely identical the differentiation by clinical history is at times impossible and often laboratory methods fail. Fortunately for our patients this is not a matter of grave clinical importance as the treatment is practically the same for both conditions.

The relative frequency of gastric and duodenal ulcer is hard to determine. Surgeons who follow the anatomical diagnosis for the location of ulcer in regard to pyloric vein find duodenal ulcer to be much more frequent. Mayo Robson placing it as two to one, while W. J. Mayo gives it as three to one. That these figures are true for surgical cases there can be no doubt, but when we consider that of

the cases presenting the clinical symptoms and laboratory findings of ulcer not 10 per cent. come to operation and that surgeons as a rule are not dealing with acute but with chronic and intractable cases we can see why the figures given by the internists so widely differ from those of the surgeon, as for example Einhorn, who finds its relation to be one to four.

Sex. Males are much more frequently affected by duodenal ulcer than females, probably three to one; while in gastric ulcer the relation is two to three. In the differentiation from symptoms we can say that as a rule pain comes on at an earlier period in gastric ulcer, that hunger pains are not so frequent, that latent periods are not so common or prolonged, that blood is much more frequently found in vomited contents, that the bland foods, alkalies, lavage or vomiting are more often attended with immediate relief and that the administration of chloratone, orithoform or anaesthesin more often gives relief to pain.

Laboratory methods are of great value, as the string tests or duodenal tube, (both introduced by Einhorn) in determining the location of ulcer when hemorrhage, however, slight, is present.

In Roentgen examination increased motility, rapid emptying and deformity of duodenal cap speak for duodenal ulcer, while retention of an opaque meal for six hours or more with normal or increased peristalsis, true incisura or hour-glass contractions make the diagnosis of gastric ulcer more certain.

Cancer. Cancer in its advanced stage can be easily recognized but when we recall that cancers usually develop on the sight of gastric or duodenal ulcer we can understand that the transition from the symptoms marking ulcer from cancer are very gradual and that the early diagnosis which is so important from the point of successful surgical treatment is most difficult. One should be on guard when treating patients for ulcer, especially if over 45 years of age, who show loss of appetite or weight, decreasing amount of Hcl, increasing anemia or cachexia. In advanced cases the following symptoms distinguish it from ulcer, loss of appetite, pain, as a rule not so marked, usually dull and continuous, paroxysms may occur at times. One is often surprised to find almost entire absence of pain or discomfort even in advanced cases. Hcl is usually entirely absent as is peptic digestion but where cancer develops at the cardia or fundus they may persist. Vomited contents rarely show bright blood but are of coffee ground appearance. Lactic acid often present, and sarcine and yeast are found on microscopical examination as is the bacillus of Oppler-Boas. This bacillus can also be demonstrated in

bowel movements examined by Gram method of staining.

Palpable tumors are found in something over 75 per cent of cases as about the percentage occur in the pyloric region and are thus open to palpation. Palpable masses are rare in ulcer but may occur with ulcers of long standing due to inflammatory exudate or adhesions. Quite rarely in thin walled individuals spasms of the pylorus may assimilate tumor.

Cancer is a disease of later life and while a few cases are reported at an age earlier than twenty, yet by far the larger amount of cases occur between the ages of forty and seventy, while ulcer usually occurs between the ages of fifteen and thirty-five.

Roentgen examination is often of greatest value as it shows deformity or filling defects due to invasion of gastric wall by the growth as it also shows derangements of motility. A very promising field in the diagnosis of cancer has been opened up in specific serum reactions, notably that of Abderhalden.

Hyperchlorhydria. Hyperchlorhydria may simulate ulcers as pains, even well marked hunger pains, and vomiting may occur. As a rule it yields to treatment. But when hyperacidity persists, especially when accompanied by hypersecretion it is as a rule due to reflex irritation of other abdominal organs, as the appendix or gall bladder. Indeed gastric and duodenal ulcers are so frequently associated with these organs that we must consider them a most probable factor in their causation, by exciting the gastric glands to excess of secretion of Hcl or from serving as foci for bacterial infection of the gastric or duodenal mucosa.

Chronic cholecystitis and cholelithiasis may give rise to errors in diagnosis as in cases where the pain point is found at the epigastrium and where vomiting gives relief, the vomited material showing hyperacidity and blood, the latter due to rupture of vessels from violent emesis. Deep pressure, however, usually shows tenderness over gall bladder, and a dorsal point of hyperaesthesia to the right between the tenth and twelfth dorsal vertebra. Careful history taking shows that there is rarely any relation between the taking of food and attacks. A slight elevation of temperature is usually found and examination of blood and urine usually show leucocytosis or the presence of bile salts in the urine.

Chronic appendicitis. Digestive disturbances occasioned by chronic appendicitis are often mistaken for gastric diseases, but pain at McBurney's point and pain on deep pressure over the appendix, the location being determined after the administration of opaque meals under screen examination, should clear up

this point. In cases where ulcer occurs at the same time as gall bladder or appendiceal inflammation the diagnosis, while difficult, may be made with relative accuracy in certain cases. At times this is not possible and we must rely on surgical exploration.

Syphilis. Ulcers of syphilitic origin or gastric crisis occurring in lesions of the spinal cord may give rise to difficulty. A positive serum reaction, however, clears up this point. In splenic anaemia (Banti's disease) with hemorrhage from the gastric or duodenal mucosa or gastrotaxis, which is characterized by repeated hemorrhages of stomach, medical diagnosis is in most cases impossible.

Treatment. The most important point in the treatment of ulcer is to remember that we are treating an individual as well as a local condition. The general condition of the patient needs careful attention and examination can not be too thorough. Examination of mouth often shows foci of infection as pyorrhea, infected tonsils, or the teeth may be in such a condition as to render thorough mastication impossible.

Blood examination may show high grade of anaemia, preventing healing. Urine may show presence of albumin, sugar, acetone, etc. Disease of liver and heart may cause disturbance of the circulation to gastric mucosa. These conditions must be relieved if we expect healing to occur, as peptic ulcer just as in other conditions where there is loss of tissue, requires for the development of granulations a normal blood supply. Rest and protection from irritation which is so important, in healing, too often means starvation when it comes to the dietetic management of peptic ulcer and food is most often given in insufficient quantities. We should remember that the blood in starvation, due to metabolic changes, contain poisons which render healing all but impossible. Prolonged withholding of food from the stomach is rarely advisable, and even when active hemorrhage has occurred non-irritating food should be given on the second or third day after the arrest of hemorrhage.

At times cases are met with which are extremely intolerant of any form of nourishment, or where small hemorrhages occur at frequent intervals. In these cases nourishment should be given through the duodenal tube by Einhorn's method.

Rectal feeding in most cases is insufficient and it is often best to reserve the large bowel for the purpose of the keeping of body fluids by giving enemas of six to eight ounces of water, or better by the Murphy drip method. Soda may be added to this when acidosis is present or feared. In many cases rest in bed is essential; this, however, should not be too greatly prolonged.

Diet. No fixed rules can be made for the feeding of ulcer cases but the diet must be arranged for the individual case and every variety of peculiarity in the taking of food can be met with. The following foods as a rule are most easily borne: egg albumin, strained gruels as oatmeal, cream of wheat, buttermilk, lactone buttermilk, koumiss or similar preparations, full milk, gelatines, tapiocas, cereals, cream of wheat, farina or spaghetti cooked in milk. At times meat broth absolutely free from grease to which tapioca, rice or spaghetti are added are better borne than milk preparations. As soon as possible toast, butter, coddled eggs, scraped steak or minced chicken should be added. This usually is about ten days.

The feeding in ulcer should be given at frequent intervals, from two to three hours; the amount based on caloric value taken at each feeding should be increased as rapidly as possible. After cure or apparent cure the patient should be warned that indiscretion in diet will bring on return of condition.

Hyperacidity. While this is often controlled by frequent feeding, at times the use of alkalis is required. When constipation is present some form of magnesia is preferable, as milk of magnesia, light calcined or perhydrol, these often advantageously combined with bismuth. When these cause too frequent movements the use of lime water with soda, as recommended by Brunton, is usually sufficient. When hypersecretion is present atropin is valuable.

Hyperaesthesia. Hyperaesthesia almost constantly accompanies ulcer so that bland foods or a degree of acidity, which could cause no irritation to the normal stomach, can cause extreme pain or discomfort when ulcer is present. This extreme irritability often results in exaggerated peristalsis, vomiting or pyloric spasm. Many remedies have been employed in relief of these conditions. Attempts are made to protect the irritated nerve endings by the use of bismuth, cerium oxalate or the use of demulcents, olive oil, mineral oil, etc, or drugs are given to obtund or anesthetize the sensitive nerve endings. The following, iodoform, ichthyol, carbolic acid, menthol, cocaine, nitrate of silver, orothorform, chloroform water have been employed with more or less success. Among the more recent remedies are chloretone 2 1-2 to 5 grains and anaesthesin 2 to 8 grains, papaverine hydrochloride 1-8 to 1-2 grains or quinine and urea hydrochloride 2 to 5 cc. of a 1 per cent solution.

We should remember that remedies administered for local anesthetic effects are practically worthless unless given on empty stomach. When nausea exists, the administration of warm soda water which if followed by emesis is usually sufficient; but in some cases lavage

is necessary. In many cases the nervous element plays a most important part. In these the use of bromides, preferably the strontium salts are of use. When the stomach is irritable chloral and the bromides administered by bowel often give excellent results.

Treatment of Hemorrhage. In cases of hemorrhage the ice bag should be applied at the abdomen and hypodermics of morphia should be given to assure rest. This is usually sufficient. At times when slight hemorrhage persists adrenalin styptacin or calcium salts, or the use of serum or coagulose hypodermically should be tried.

Surgical Treatment. The decision to operate more frequently rests with the internist than with the surgeon. As a rule there should be no disagreement. Those cases with organic pyloric stenosis, hour glass contractions or perforations come definitely under surgical treatment. To these we must add cases where repeated hemorrhages occur or where relapses after apparent cure persist. Again in those cases in which improvement is slow or arrested from inability to take sufficient nourishment, surgical intervention should be considered and this before the patient has reached a stage of exhaustion in which surgery would be a last resort.

Consequences of Heat Stroke.—Bittorf has had a number of men under supervision for almost a year since they had heat stroke last August. He also has had a number of patients who had been sent back from the front on account of heat stroke. During the first few days the men complained mostly of headache and languor, with sometimes nervous tachypnea and weak voice. Then a few days later, the majority developed severe hysteric convulsions. True epilepsy was never observed, but the hysteric convulsions kept up, and not one is entirely free from them to date although the last one was discharged from medical oversight in April, 1915, as capable of garrison duty, and has improved since. There can be no doubt, he says, of the hysteric character of the rapid breathing and rapid pulse, abasia, astasia, stuttering, disturbances in gait and tetanoid attacks. One man has had tachycardia of 140, even in repose, unmodified during the nine months to date. Bittorf states explicitly that there can be no question of imitation in his cases, but all the severer forms of heat stroke followed by hysteric sequels. A pronounced inherited nervous predisposition was evident in only one case; the man's mother was known to have suffered much from headache. No inherited taint could be determined in any other case. The relatively unfavorable prognosis is remarkable, he adds.

GASTRIC AND DUODENAL ULCER, (SURGICAL).*

By M. CASPER, Louisville.

Is gastric and duodenal ulcer relatively less frequent in this locality than farther north or east? Or is its existence not recognized relatively as frequently?

These questions are sufficient excuse for going into this important subject at this time.

Gastric and duodenal ulcers are distinct entities from most all points of view, and really should be considered separately.

Duodenal ulcer is more frequent than gastric though this fact has only recently been fully established. Several prominent authorities give duodenal ulcer in proportion to gastric as three to one. The main points in diagnosis are:

First. Anamnesis.

Second. Radiography.

Third. Physical findings.

Fourth. Chemical findings.

The history is usually recognized first in importance in diagnosis. Indeed Moynihan claims that the history is nearly always conclusive, and practically pathognomonic in duodenal ulcer. Though, of course, he does not exclude other aids of diagnostic value.

The history is indeed most valuable when properly and accurately taken.

Radiography is growing in value more and more every day in this field of diagnosis.

To the expert the roentgen ray is worth about 80 per cent in gastric and 90 per cent. in duodenal ulcer. (Carmen).

Roentgen signs of gastric ulcer may be divided into positive and suggestive.

Positive when we get the spur or projection due to the barium filled crater of ulcer. There are also accessory pockets if ulcer has perforated, and sometimes even a cavity of variable size. In this latter a strata of gas may overlay the barium shadow extra-murally.

Suggestive signs usually given are:

First: insinua. (fixed indentation). Second hour-glass. Neither of these two radiographic signs are of value unless occurring constantly and persisting after an antispasmodic, and then may be cancer as well as ulcer. Third: partial fixation due to presence of adhesions and which may result from extraneous pathology. Fourth: localized tender point noted while pressing on stomach under the screen. Fifth: retention of portion of barium meal over six hours. Sixth: antiperistalsis is apt to accompany obstructive ulcer of pylorus. Seventh: dilatation of stomach in gastric ulcer.

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Roentgen signs of gastric ulcer near the pylorus indirectly resembles very much those of the duodenum, sometimes both gastric and duodenal ulcer co-exist, but both are seldom detected by roentgen ray when coincidently present.

The roentgen signs of duodenal ulcer are:

First; gastric hyper-peristalsis is one of the most important and may exist regardless of emptying time of the stomach. Second; a six hours rest or residue in the stomach and sometimes in duodenum indicates obstruction, usually due to scar contraction. Bands and adhesions may give this sign also. Third; perforating ulcers show an accessory pouch which sign is infallible when obtained. Fourth; hypermotility with early clearance of stomach with marked consequential filling of duodenum in non-obstructive duodenal ulcer. Fifth; deformity of cap or bulb. Sixth; pressure tender point. Seventh; hour-glass of stomach or duodenum. Eighth; Dilated stomach is rule in obstructive conditions of long standing and contracted stomach in recent or non-obstructive ulcer.

TREATMENT.

In considering surgical treatment of ulcer it is well to consider the gastric and duodenal ulcer separately, because the treatment is quite different. Long standing chronic ulceration of either duodenum or stomach is usually complicated and hence each is to be attacked according to conditions present.

Ulceration of the stomach may be a simple mucous erosion and scarcely affects other than the mucosa itself. This variety is hard to diagnose and may give rise to acute hemorrhage which may be profuse. The treatment of this form of ulceration is strictly medical, and it is this form that often gets well with or without treatment.

Second; chronic callous ulcers, these involve the deeper coats, can usually be detected by roentgen ray showing barium filled crater, this form of ulcer often perforates into an artery or vein and causes hemorrhage according to kind and size of blood vessel penetrated. They are usually the cause of prolonged intermittent and anemic resulting bleeding. This form of ulcer is a surgical entity as a rule. We frequently see them, however, after they have been supposedly cured perhaps several times by different medical men. Third class of gastric ulcers are the various acute and chronic perforating ulcers with variable complications, they are always surgical conditions demanding immediate action. Fourth; carcinomatous ulcer in the various stages of development. These may be macroscopically impossible of differentiation. Medical treatment of this class of

ulcer is indeed trifling with opportunity. A patient with an ulcer is to a degree subject to acute danger, and should be always forewarned of such possible danger and avoid unnecessary delay in the recognition of any eminent and precarious perforation, should he chance to fall into the hands of some physician unfamiliar with patients previous trouble.

The chief dangers of gastric ulcers are; first, hemorrhage; second, perforation; third, cancer formation; fourth, stenosis, if in pyloric region. Other dangers exist, such as malnutrition and chronic invalidism which naturally predispose to other intercurrent diseases. Gastrojejunostomy is the recognized operation for gastric ulcer with excision of the ulcer. Recently Balfour's method of cauterization has met with warm approval. All gastric ulcers should be excised or destroyed by cauterization, because of cancer menace. This disputed point is about settled now, and the only question that remains is what proportion of cancers of the stomach are preceded by ulcer period. Gastrojejunostomy does most good of course in ulcer of pyloric region on account of improved drainage. This operation probably produces most good by changing the physio-chemical action of the stomach as pointed out by Patterson. In case ulcer is on posterior wall of stomach it may be attacked by transgastric route. Ulcer in pyloric end is best treated by Rodman's pyloroplasty, especially if multiple. Ulcer-cancer and a very large area of ulceration require partial gastrectomy, and union of stomach to jejunum according to Polya's method. In case of real emaciated patients where, on account of adhesions and site of ulcer, etc., excision and gastro-jejunostomy are not possible, a temporary jejunostomy may be performed and patient nourished per jejunal feeding until a more opportune time.

Perforation calls for immediate action, and is to be handled according to exigency of the case. Perhaps simple closure with purse-string suture and cleansing of soiled peritoneum are all that can be done and indeed often suffices for cure. The wisdom of extensive operation in these cases is doubtful, and extremely hazardous. In duodenal ulcers, gastro-jejunostomy is usually curative. Excision here also when the ulcer is accessible is being practiced more and more. Infolding may answer equally as well, as we not only protect the ulcer, but cause partial occlusion. In lieu of infolding or excision with gastrojejunostomy Finney's operation is often of great value, and often suitably combined with excision. Likewise the Heineke-Mikulicz pyloroplasty can be employed for ulcer near the pylorus. Occlusion of the pylorus is being advocated by many just now in connection with gastroje-

jejunostomy. The indications given by Gibson and Beckman in a recent article are first, "The absence of narrowing of the pylorus in chronic ulcers, and second, active ulceration of the pylorus and more particularly of the duodenum." Neither Mayo or Moynihan take kindly to these operations especially permanent blockage, though both have used them occasionally.

Perforating duodenal ulcers like perforating gastric ulcers require prompt surgical intervention, also it is to be remembered these perforating ulcers are not infrequently multiple. In case of duodenal ulcers, Petran, has called attention in a late "Annals of Surgery" to the possibility of retro-peritoneal perforation and reported a series of cases.

The causes of failure in gastrojejunostomy are: first, vicious circle; second, narrowing or closing of anastomotic opening; third, jejunal ulcer; fourth, persisting irritation of non-absorbable inner suture; fifth, gastro-jejunal ulcer.

Nearly all of these are obviated by the more improved technique of posterior, no-loop gastrojejunostomy using absorbable inner through and through suture and otherwise careful manipulation of anastomotic structures. The final results of operative procedure in gastric and duodenal ulcers compare favorably with operation on gall bladder and appendix also, mortality is likewise reasonably low, and being constantly lowered.

We will not go into a long dissertation of statistics on ultimate results, but quote J. Sherren, who says "Operation in unselected cases of gastric and duodenal ulcers can be carried out with a death rate of less than 3 per cent. and carries with it relief in certainly 96 per cent. of the cases and the probability of cure in over 80 per cent." Many surgeons and operative clinics proclaim a mortality of less than 2 per cent.

We cannot too strongly emphasize the hearty cooperation of the internist and the surgeon in this class of work, not only prior to but after operation as well.

Dr. Henry Clay Stone, aged seventy, died November 12, 1915, at six o'clock at his home in Constantine. He was for many years a resident of the Laurel Ridge section, of this county, and occupied a prominent place in the affairs of Constantine during the latter part of his life. Surviving him are two daughters, Mrs. L. D. Hall and Mrs. Jeff Hudson, both of this county. Burial occurred Thursday at the Holbert burying ground, near Vertrees.

THE IMPORTANCE OF POSTURE IN EXAMINATION, OPERATION AND TREATMENT OF RECTAL LESIONS.*

By GRANVILLE S. HANES, Louisville.

Since posture is an essential factor in the management of lesions involving the lowermost extremity of the intestinal tract, and also the locality immediately surrounding its outlet, the importance of an adequate understanding of the advantages to be obtained by having the patient assume certain positions for definite purposes, requires no further emphasis.

With the individual in any of the normal body attitudes the majority of the rectal lesions which the surgeon is called upon to investigate are quite effectively hidden from view. Therefore, in dealing with this portion of the human anatomy, posture alone will oftentimes determine the surgeon's failure or success.

Ordinarily the Sims' position, with the gluteal folds well separated, will afford the requisite advantages for examination of the tissues surrounding the rectal outlet; it will also permit one to gain certain information concerning the irritability and contractability of the muscles controlling the exit to the intestinal tract. If there be present no irritation nor consequent contraction of the levator ani muscle, by steadily straining for some time the patient can sufficiently evert the anal walls to result in extrusion of hemorrhoids; and also polypi situated low in the rectum or those having long pedicles. On the contrary, however, if the levator ani be in a state of tetanic contraction and in consequence has become considerably hypertrophied, although the hemorrhoids be quite large, the patient may be unable to accomplish their extrusion. Under such circumstances it becomes necessary to have the patient assume the "squatting" posture, and even then a stimulating enema may be required to obtain the advantage of exaggerated peristalsis in addition to the increased expulsive force afforded by the squatting position. I have seen patients who were totally unable to extrude hemorrhoids while remaining in the left lateral posture, where the squatting position and an enema reveals the presence of enormous hemorrhoidal tumors. It is seldom possible to gain an adequate idea as to the size of such tumors until the individual has assumed the squatting posture and has strained a sufficient length of time to thoroughly distend every hemorrhoidal ves-

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sel with blood. While most digital explorations of the anal canal and lowest portion of the rectum can be satisfactorily made with the patient in the Sims' position, occasionally the dorsal and squatting postures will be found more advantageous.

The dorsal position, with the thighs well fixed upon the abdomen and the patient's hands separating the nates, is the most satisfactory for minor operations under local anesthesia, and especially in the dressing of large fistulous wounds. In all procedures of this kind, the gluteal folds must be kept well separated, otherwise satisfactory and skillful work cannot be done.

I now employ the dorsal posture in the majority of post-operative dressings, particularly where there are large wounds, and in all operations performed at my office. With the patient in the dorsal position, the hips being elevated by placing a sand bag beneath the sacrum, the anal canal and the inferior extremity of the rectum can usually be thoroughly exposed and inspected provided the proper instruments are employed.

By virtue of the fact that various instruments and illuminating appliances are now available by which the interior of the rectum and sigmoid may be as plainly seen as "the hand before the face," it is not difficult to understand why other methods of examination have become obsolete. When there are present no tumors nor strictures to prevent the introduction of tubular instruments into the rectum, this method of procedure will enable the surgeon to obtain an accurate view of its interior. Three essentials must be provided, however, before this method of examination can be successfully conducted: (1) a tubular instrument, (2) a direct or reflected light, and (3) complete separation of the rectal walls. There are numerous proctoscopes and procto-sigmoidoscopes with electric light attachments suitable for this purpose, or plain tubes through which light can be reflected with a head mirror may be employed. The third and most difficult feature is that of separating the rectal walls. With the patient in the lateral position, no information whatsoever can be obtained by simply introducing a hollow instrument into the rectum. So long as the patient remains in that posture the pelvic cavity is occupied by the intestine, and when the obturator is removed the intra-abdominal pressure forces the rectal walls into the distal end of the instrument. The view of the mucosa is thus obstructed excepting for a small area which is forced into the end of the proctoscope, and this area is seen under such unnatural conditions that the character of the mucosa appears markedly altered. Another type of instrument was

later constructed with an airtight window fitted into the proximal end, the window having a device for attaching a rubber bulb by which air could be forced into the rectum and thus balloon its lumen and facilitate examination.

It was soon demonstrated that this method of investigation had certain serious objections. Considerable pressure is necessarily required to elevate the intestine from the pelvic cavity, and it means that the force exerted by air pumped into the rectum must be greater than the intra-abdominal pressure, as the viscera must be lifted from the pelvis to permit the rectal and sigmoid walls to expand. The air forced inward under such great pressure soon passes higher into the large intestine, and the rectal walls collapse; or if the sphincter muscles are weak, it escapes. Under these circumstances it becomes necessary to continue forcing air into the rectum to keep its walls separated. If the examination proves tedious, as is usually the case, the patient may suffer considerable discomfort from gas pressure both during and subsequent to the examination. It is impossible to remove secretions, blood, etc., from the mucosa, as no additional instrument can be introduced on account of the window in the proctoscope, and for the same reason no operation nor application to the mucosa can be made. Therefore, the lateral and dorsal positions are not entirely satisfactory for either rectal examination or operation.

Subsequently the knee-chest posture was suggested, which proved more satisfactory than any previous method in the accomplishment of proctoscopic examination, from the fact that with the patient in this posture the viscera gravitate from the pelvic cavity allowing the atmospheric pressure to balloon the rectum to a greater or less degree.

The principal objections to the knee-chest posture are that the patient must climb upon the table and present the fundamen in a position as high above the balance of the body as possible. No one likes to do this, and females especially resist the idea of assuming such an awkward posture. Difficulty is always experienced in having the average patient of either sex assume the correct knee-chest position, and if accurately posed it is tiresome; if there is the least pain or the patient becomes frightened, the knees almost invariably slide backward upon the table, and the exposure is thus entirely lost. Despite all efforts the abdominal walls oftentimes remain partially contracted, and the viscera do not gravitate from the pelvis; the operator is necessarily in a stooping or twisted position, which is awkward and exceedingly uncomfortable; it is difficult to successfully intro-

duce fluid into the rectum and sigmoid in the majority of instances with the patient in the knee-chest position.

The inverted posture, which was suggested by myself several years ago, is the simplest and most satisfactory position for proctoscope examination. Not only is this posture preferred by the patient, but distension of the rectum being more complete, the surgeon works under the easiest and most advantageous conditions. The question is often asked whether women will assume the inverted posture without difficulty. The procedure is so simple that no one objects so strenuously to assuming this posture as to the knee-chest position. This posture can be readily secured by placing the patient head downward over the side of the bed, the end of the table, or other flat surface of proper height, which will partially support the body weight. The weight is supported at two points, viz., where the thighs rest upon the edge of the bed, and where the elbows rest upon the floor or other suitable object.

In the inverted posture the idea is not to completely invert the trunk, the body being simply placed at an angle of about 45 degrees to a perpendicular line at the point where the hips are supported. This posture causes the back to sag which allows the abdominal muscles to relax, and space is provided within the abdomen for viscera ordinarily occupying the pelvis. Intra-pelvic pressure is thus relieved, and when the patient becomes thoroughly relaxed in this posture, the sphincter muscles will oftentimes dilate of their own accord, (if thin and free from irritability) and the rectal mucosa can be easily seen. This phenomenon is the result of the pelvic viscera gravitating toward the diaphragm, thus producing within the pelvis a more or less complete vacuum.

When the elbow support is at an angle of 45 degrees, and not directly under the hips, the patient can remain in this position with a fair degree of comfort for an indefinite period. The head is not "ducked" between the arms, but is held outward in almost a horizontal position, which greatly adds to the comfort of the patient. With the patient in this posture the air is forced far upward into the colon, as intra-abdominal pressure is greater than the atmospheric weight, and if he will strain just as the distal end of the proctoscope is being withdrawn the air will escape, and no discomfort result from its introduction. When in this posture the patient cannot move around nor change his position, thus interfering with proper investigation, as can be so easily done in the knee-chest position.

Any posture is valueless unless by its assumption the abdominal muscles become well

relaxed. Many physicians absolutely fail in their rectal examinations, in either the knee-chest or the inverted posture, because the patient is nervous and the abdomen is contracted, which forces the rectal walls into the end of the instrument, making the investigation worthless. I always persuade the patient to allow the abdominal muscles to become flaccid, the view of the rectal and sigmoidal lumen thus obtained being satisfactory. It must be borne in mind that such examinations are of value only when the intestinal lumen dilates in front or beyond the distal end of the proctoscope. The more complete the ballooning, the more satisfactory the exploration.

In making proctoscopic examinations in the inverted posture, no fluid can enter the distal end of the instrument unless the patient strains, the force of gravity having a tendency to remove everything away from the distal end of the instrument. There is no necessity for a window in the proximal end of the proctoscope, and the surgeon has the advantage of observing the rectal mucosa through an appropriate instrument without any objects encroaching upon its lumen.

In almost every instance, in making a rectal examination, it is necessary to rub some portion of the mucosa with gauze or cotton, or to scrape the surface to obtain a specimen as an aid in the diagnosis. Moreover, as occurred in my office yesterday, it is sometimes impossible to dilate the rectum to a sufficient degree by atmospheric pressure to allow the examining instrument to easily traverse its lumen; where the rectal wall is irritable, this not infrequently happens. Under such circumstances it becomes necessary to employ a pledget of cotton within the grasp of alligator forceps, introducing this just in advance of the sigmoidoscope, to dilate and straighten the lumen sufficiently to make the passage of the instrument easy. This procedure would scarcely be possible in any other than the inverted posture, and there is also less likelihood of the patient forcing the abdominal contents upward into the pelvic cavity thus interfering with the exploration.

With the patient in the inverted posture, the surgeon can stand in an easy attitude; he is able to look directly into the proctoscope and make any manipulations desired within the rectum without being forced to assume a cramped position. With the patient in a comfortable posture, if the surgeon has the proper instruments and is himself at ease, a diagnosis made under such circumstances is one upon which undoubtedly the greatest reliance may be placed. On the contrary, however, any work performed under difficulties may be and oftentimes is imperfectly executed.

A great deal has hitherto been said and one still hears at various intervals, about certain surgeons having been able to introduce a long sigmoidoscope into the descending colon. Several years ago I demonstrated by experimental work upon the cadaver and also by the X-ray that it was impossible to introduce any instrument, especially one that was non-flexible, into the descending colon of a normal individual. Only last week there appeared in one of our leading medical journals an article written by a man who claims to be a specialist in this line of work in which it is stated that he had succeeded in doing what I have just declared is absolutely impossible. No one making such assertion has ever claimed that it was proven by radiography, or by experimentation upon the cadaver. Such assertions are entitled to no more credence than the early statements concerning the introduction of rectal tubes through the entire length of the large intestine! Six or eight years ago it was my pleasure to demonstrate by the X-ray that introduction into the large intestine of rectal tubes, bongies, etc., was an absolute failure, and I have the same proof to present now.

In the introduction of instruments into the rectum and sigmoid, with the patient in the inverted posture, there is no necessity for employing an anesthetic; in fact an anesthetic is contraindicated. The patient cannot well be anesthetized in this posture, and even if he could, no advantage would be thus obtained. Again, under these circumstances, there is no danger whatsoever in the introduction of an instrument, the rectal lumen is distended in front of the distal end, and the operator sees every motion and the exact position of the proctoscope during every inch of its insertion. And as already intimated, the rectum can be ballooned in front of the instrument, thus making possible introduction of the sigmoidoscope in a more satisfactory manner than could be accomplished under any other circumstances.

Shortly after the proctoscope was devised a number of instances were reported where the rectal wall had been perforated by attempting to introduce the instrument with the patient in the lateral position, and without the surgeon being able to observe the end of the instrument as it was inserted through the rectal lumen.

When the introduction of a considerable quantity of fluid into the large intestine is desired, no posture can equal the one just described. The large intestine always contains more or less gas, and with the patient inverted when water is poured through the proctoscope the gas is forced outward; whereas otherwise it would remain and prevent the

introduction of fluid. By this method the gas escapes and if desired the intestinal lumen may be entirely filled with solution.

While the same procedure might not often prove effective, upon one occasion I relieved a "twist" of the sigmoid by inverting the patient and filling the bowel with water, where it was presumed an operation was inevitable; evidently the weight of the fluid assisted in overcoming the sigmoid twist. Not infrequently patients have been temporarily relieved of constipation by the assumption of this position and the introduction of water; the weight of the liquid poured into the bowel undoubtedly straightened kinks or twists in viscera which had become impacted in the pelvic cavity.

After successfully employing the inverted posture for two or three years, I had The W. D. Allison Company, of Indianapolis, Indiana, make a table for me which adds much to the patient's comfort and the surgeon's convenience. This table is so constructed that it may be used for general purposes, in addition to obtaining this special posture. It is unnecessary for the patient to climb upon or off this style of table; when he leans upon the flat surface, inversion is secured by a manipulating device which places him in the exact posture desired; when the exploration is finished, by reversing the manipulating device the patient is replaced upon his feet just as he was before beginning the examination.

In rectal and sigmoidal examinations it is oftentimes of the greatest importance that the surgeon be able to introduce instruments through the proctoscope. In searching for the ameba the most accurate and reliable plan is to curette ulcers which are observed in the mucosa of the rectum and sigmoid, the parasite being thus dislodged from its habitat and transported to the warm microscopic stage with no risk of its being lost in feces, blood, etc. Under such circumstances, the technique mentioned is so easily and rapidly conducted that the parasite is not exposed to widely varying degrees of temperature which invariably inhibit or arrest its motility. Few investigators can be relied upon to make the diagnosis of amebic infection unless the parasite is seen in motion; a sudden reduction in temperature is certain to produce complete inhibition of all motile activities.

Curettement in other forms of ulceration, the application of drugs, and also heat by means of the Paquelin cautery, are all potent and essential methods of diagnosis and treatment in a great variety of lesions encountered within the rectum and sigmoid.

It is the simplest kind of a procedure to observe polypi within the rectum and lower segment of the sigmoid, and at the same time

time remove those of ordinary dimensions, an anesthetic being unnecessary. If any degree of anesthesia were required, novocaine could be easily injected into the base of the tumor.

In strictures due to cancer and other causes, it may be desirable to ascertain the extent of encroachment of the growth upon the lumen of the bowel. This is oftentimes a difficult task, and no factor in such an effort is equal in importance to that of posture.

The knee-chest posture may be employed in many of the manipulations mentioned, but the complete view of the parts, the easy and effective means provided for the surgeon's manipulations, are ample reasons for recommending the inverted posture.

SUMMARY.

1. Without proper posture, the examination, operation and treatment of rectal and sigmoid lesions will oftentimes prove disappointing if not absolutely worthless.

2. The Sims' and lateral positions are suitable chiefly for external inspection, digital examination, and sphincter dilatation.

3. The dorsal position is more satisfactory for the performance of operations under local anesthesia, and in dressing large fistulous or other wounds about the rectum.

4. The knee-chest position may sometimes be used with a fair degree of satisfaction, but in many instances for obvious reasons cannot be successfully employed.

5. In all rectal and sigmoidal lesions, where the greatest accuracy is required in examination, diagnosis and treatment, no posi-

The Ambard Formula in Chronic Kidney Disease.—Klinkert reports fourteen cases of chronic nephritis in which the course was treated with Ambard's formula. Three of the patients were men of 24 or 30 with albuminuria, but the Ambard formula showed constantly normal figures for the urea index, and the course of the cases confirmed the assumption that there was merely a tendency to orthostatic albuminuria. When a normal Ambard index is confirmed by a normal response to the test ingestion of 20 mg. urea on a test diet, the suspicion of chronic kidney disease, even in its earliest incipency, is rendered untenable. In three other cases the Ambard formula warned of impending danger and by dietetic restrictions based thereon the danger was averted, the headaches cured and the Ambard index brought to normal.

The value of the blood-urea index seems to be confirmed anew by the fifteen cases related. There is retention of nitrogen in all forms of uremia, and although the patient may seem not to be incommoded by it, yet his life hangs by a thread unless the diet is regulated to keep down the nitrogen to a low point and thus leave little to be retained. The urea content of the blood is thus reduced and the patient's symptoms improve.

A PLEA FOR MORE CONSERVATIVE SURGERY ON THE FEMALE GENERATIVE ORGANS.*

By A. H. BARKLEY, Lexington.

In presenting this paper for your consideration to-day, I am fully alive to the fact that I have nothing new to offer but a reiteration of facts already well known to you may serve as a reminder that the subject is one full of interest to both the physician and surgeon.

In the days of old there were men who were both radical and conservative, both in their views and their actions; and so it is at the present day. There are surgeons who hold extreme views regarding certain conditions and who carry out these ideas in their daily practice, the end results of which, in most instances, will not bear close scrutiny. These radicalisms are often the result of improper training, as is evidenced by the fact that a man will see a surgeon do a certain operation for a definite condition, and ever thereafter the poorly equipped man will continue to practice likewise, without due regard to the degree of the trouble and whether or not some other form of treatment less radical would have answered. Then again, we see the extremes taken regarding certain conditions by surgeons who are skillful, and who ordinarily exercise the greatest care and judgment, as an example in cases of ptosis of the abdominal organs and intestinal stasis; I think it is generally conceded that in these conditions there have been as yet no fixed and definite conclusions as regards treatment, as is proven by the fact that the end results of cases treated radically are by no means flattering. In speaking to you on conservative surgery, I think it best to confine our discourse to a limited part of the anatomy, as a resume of even the salient points of this subject covering the whole field of surgery would require more time than I am allotted.

In the course of nearly twenty years of surgical practice, I am convinced that more bad surgery and, I might say, more unnecessary surgery has been done in the pelvis than in almost the entire body, and it is to this portion that the following remarks will be directed.

The overwhelming commentaries on the disastrous radical treatment of pelvic conditions are, I think, well known. This is especially true in acute inflammatory infections—so much so that the surgeon is impressed with the good sense of conscientiously following conservative treatment. The non-operative treatment in acute pelvic infections, while

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there is rise of temperature, pulse and a leucocytes, is now generally accepted except in extraperitoneal drainage, vaginally, or above Poupert's ligament in pelvic abscess. Were it possible in chronic inflammatory conditions to determine accurately the germ or germs causing the infection, many operations done early could be deferred to a later date, when the risk to the patient would be minimized, as some germs become sterile or inactive after a shorter period has elapsed than others: for instance, the gonococcus has a shorter period of activity than the streptococcus—hence an operation for the latter condition, when done early, carries a higher mortality than when done at a later date. We are certainly not justified in the employment of radical measures in mild pelvic infections, nor are we in primary attacks of more virulent types, unless they threaten to destroy life.

This is especially so in young women where there is little danger of temporizing, and also where the economic question of a livelihood can be ignored. This is of great importance from a sociological standpoint of preserving the female generative organs, thereby not sacrificing the function of procreation, while we must consider also the psychological impression which depresses the patient with the knowledge that she has been unsexed.

Those of us who see many gynecological cases are constantly impressed with the fact that a goodly number of the cases of pelvic infection clear up and subsequent impregnation takes place, which proves the fact that at least one of the tubes has functionated.

Occasionally we see a patient with a severe pelvic infection who recovers symptomatically without a radical operation having been performed.

The ovary is the analogue of the testicle, and being an organ of the utmost importance it behooves us, when operating upon the ovaries, to be as conservative as is consistent with good work. Some conditions, however, demand radical treatment, while in many cases radical treatment is employed to the detriment of the patient where conservatism would have answered much better. An ovary that contains pus in any appreciable amount should be removed. With a small amount of pus in one ovary and the other ovary absent, an attempt may be made, if conditions be favorable, to save a portion of the organ. The question of sterility enters into these operations, and while some women do not want children, the operator should not allow himself to be persuaded by the importunities of his patient, to remove healthy organs or those slightly diseased with fair prospects of ultimate recovery. Given a patient whose tubes are irreparably damaged by disease a double oophorectomy is in the vast majority of cases

imperative, as nature has already rendered her sterile and this need not be considered.

The disagreeable symptoms which usually follow the reckless and indiscriminate removal of both ovaries are well known, as the patient is depressed mentally in about twenty per cent. of the cases operated upon from the reason that she realizes that she is prematurely aged, and that the possibility of the fulfillment of her marital relation successfully has been forever removed from her. The artificial menopause does not always bring the anticipated relief and while patients vary as to the severity of symptoms, and that the age at which double ovariectomy is done in many cases plays an important part, there can be no doubt, as Peterson has shown that the most serious effect is felt between the ages of 40 and 45 years. While some will suffer slightly more than one-half will suffer considerably, and in definite proportion the result will be little short of disastrous. The hot flashes, mental symptoms, and the fact that these symptoms may last from two to five years and that in about fifteen per cent. the sexual instinct is destroyed, should cause one to exercise judgment in operating upon the ovaries and not be guilty of making confirmed invalids out of sick women who would in many cases, with proper care and treatment, be restored to healthy and happy individuals.

In general, resection of an ovary possesses a limited field of usefulness: the proportion of cases resected which comes to a secondary operation is great—first because the ovary resected is primarily a diseased ovary and second because the blood supply is interfered with on account of the mutilation and placement of the necessarily deep sutures.

The cases of a single retention or pedunculated cyst are most favorable to resection; these single retention cysts should not be confounded with cystic degeneration, which latter condition gives uniformly bad results when conservative treatment is employed. The important factors to be considered in conservative ovarian surgery are the maintenance of sufficient blood supply and leaving the ovary in normal position if possible.

In conserving ovaries, and this applies to all other forms of surgery, it is necessary for the surgeon to train himself to diagnose pathologically while in situ.

With regard to conservative operations on the uterus, I will say that with our present knowledge of the function of the uterus and the well known fact that without the ovaries it plays a very insignificant part in its contribution to the welfare of its possessor under such conditions, it is now generally conceded that to be conservative it is best to remove it supravaginally in most cases where double ovariectomy is necessary. After its removal it

leaves a much better support to the roof of the vagina and again, the patient is often saved the annoying pain so common after the uterus is left following a double oophorectomy. In my own practice I recall five cases all of which were promptly relieved by a supravaginal hysterectomy. I also recall a number of cases in my work where, after both ovaries were removed, the flow became so bad that curettment was necessary. In subperitoneal tumors, when not too large, and in pedunculated tumors, this organ lends itself peculiarly well to a conservative procedure.

Probably of all parts of the adnexia the tubes are least suited to conservatism. The presence of pus is an indication for its removal; adherent tubes in which the abdominal opening is closed should be removed. It may be stated that in any case where either the abdominal or uterine end of the tube is closed, removal is the only avenue open to relief. The different operations for making an opening and maintaining its patency are usually followed by failure.

The percentage of cases in which pregnancy has taken place after salpingostomy is very small, while recurrence of the former trouble is quite frequent. With the present development of tubal surgery, about the only condition in which conservative work is at present justified is in an old hydrosalpinx which has remained quiet for a considerable period of time; however, some success has been had in treating cases conservatively where one tube is diseased and the other normal by disturbing the latter as little as possible. When a salpingostomy is decided upon a radical operation is the one of choice or removing a wedge shaped portion of the cornua of the uterus together with the intra-mural part of the tube.

Knowing as we do full well, that the vast majority of conservative operations on the tubes are unsatisfactory from the reason that a very large percentage of diseased tubes are gonorrheal in origin, I think we should take the patient with badly diseased tubes into our confidence and tell her plainly that total removal will usually be more satisfactory both to her and the surgeon, unless maternity is especially desired, in which case she alone should decide between total removal and a conservative operation, and tell her that following the latter course that the possibility of pregnancy is by no means an assured fact.

In doing pelvic surgery and considering the same from a conservative viewpoint, we can not get away from certain facts; for instance, the time when to operate, as was stated at the outset of this paper, that after all acute symptoms have subsided usually yields the best results—the age of the patient and whether she has children or is desirous of having them are also points which must be

carefully weighed; and her social standing—whether or not she will be compelled to earn her living; and last, but not least, her temperament. As these points are of vital importance to her, they should by no means be overlooked by the surgeon, on whom the responsibility rests, ever keeping in mind that palliative treatment often yields excellent results, as often tender tubes resolve themselves sometimes with adhesions and sometimes without—also inflamed and painful ovaries subside and by a palliative line of treatment a large percentage of selected cases, which are often subjected to the most wanton radicalism, can be spared any operation whatever.

The mortality from conservative work is very much less than when more radical measures are employed, as is attested by the fact that statistics from various large clinics show a uniformly low mortality and morbidity when treated conservatively than otherwise.

This paper is not intended to minimize the importance of radical work when judiciously employed, as many cases can only be dealt with successfully in a most radical way; but it is intended to deprecate the wholesale removal of organs that mean so much in the way of happiness and health to their possessor.

DISCUSSION.

J. G. Carpenter, Stanford: I appreciate the work Dr. Hanes is doing, and it is with a great deal of pleasure that I open the discussion on these two papers. Away back in June 1886, I believe it was, when the society met at Winchester, I reported a case of ulceration of the sigmoid with illumination; inversion of trunk, electric and reflected light in diagnosis and treatment. —(Published in the American Practitioner and News, Vol. II, New Series No. 17, August 21, 1886). I saw fourteen inches into the bowel, and treated an ulcer twelve inches from anus in sigmoid. Dr. Hanes has not only confirmed what I stated at that time almost word for word, but idea for idea. At that time I was laughed at and ridiculed and tabooed but to-day I see I have again been confirmed.

With reference to the inverted posture, I elevated the patient, stood him on his head and left shoulder and had him suspended, and I saw everything that it is possible for Dr. Hanes to see with his position. You do not want the table that Dr. Hanes has shown; you can make use of a washstand, bureau, table, foot of bed, or box, or whatever you think will answer the purpose, as I have often done. If you cannot get the benefit of sunlight, you can use a tallow candle with a head mirror, or use a sperm candle, coal oil lamp, or an electric light as the case may be, and if you use common sense, as Dr. Murphy said, the procedure is half done. In the application of the inverted posture the air rushes in, it balloons

the rectum and sigmoid, and the rectum becomes a comparatively straight tube with a long meso-sigmoid, and you can see much farther than with a short one. Then in inspiration the rectum and sigmoid collapse, and when the patient expires it balloons up like a patient in the Sims posture balloons the vagina, so that the ballooning helps you to see. You throw a light with the head mirror, and with that ballooned condition you can see two inches beyond the sigmoidoscope. It is surprising how much water or oil you can pour into the rectum, a gallon or more, and I have seen it go around and have been able to palpate it in the cecum. I have seen patients pass a gallon of water I have put in. I maintained at the Winchester meeting that it was folly for any practitioner to claim that he could pass a rectal tube beyond the sigmoid. I tried it time and again and the tube would coil up. I treated the patient I have referred to and he made a complete recovery; and yet doctors who heard that doubt to-day if sigmoidoscopy was ever done until Kelly came out eleven years after I had done it and claimed to set the world on fire. Kelly was a medical student at the time I did my first sigmoidoscopy, and many other sigmoidoscopies since I had the first patient.

J. M. Mathews, Louisville: I fear that Dr. Hanes has failed to make himself perfectly clear in this most excellent talk of his because we were paying too much attention to the motion pictures. There are a few points that I desire to call especial attention to. The paper is intended more for the general practitioner than for the specialist, it being his intention, I take it, to afford them a way to make it easy to diagnose rectal conditions. He has made it very plain that the colon can be explored by means of this position that he has described. In the past we have tried many positions for this purpose, but I see in the Hanes position many advantages over any and all of them. The many proctoscopes that have been suggested for the purpose of examining the colon, are to my mind dangerous to use and reveal but little. By inverting the patient and inserting a comparatively short proctoscope the mucosa of the colon can be examined for the reason that by the pressure of air, that rushes in, the gut is well distended. There is an opinion in the profession that a colon tube can be easily inserted into the colon. I am sure that all who have tried it will admit that it is a very doubtful procedure. Hence it is that Dr. Hanes does not rely upon this method in flushing the colon, but says we can accomplish the purpose by simply pouring in the fluid through a short proctoscope, with the patient in the inverted position. In this connection allow me to say that in cases of auto infection, it is a most admirable plan to practice this method by which the colon can be kept clean. I thank Dr. Hanes for so simplifying

the examination of the colon for diagnostic purposes.

J. Garland Sherrill, Louisville: I have been asked to discuss both of these papers, but I wish to speak first on the paper of Dr. Hanes. It is certainly a great pleasure to belong to a society that produces such a man with an inventive brain like Dr. Hanes, who has furnished to the profession and to the practitioner a most simple method of examining the rectum directly with the eye as well as the lower portion of the sigmoid flexure, which is the best means of examination. It is true, that by means of air distension, and with rather extensive apparatus, with illumination you can make an examination of this portion of the bowel, but by no means in the successful manner that has been done by Dr. Hanes. Really, it is surprising with what ease you can introduce a tube and with what facility you can see the lesion which may be present in this condition.

There was one point touched by Dr. Matthews, and not mentioned by Dr. Hanes, which should be emphasized, and that is in the insertion of a long straight metal tube into the gut without any guide, there is danger of perforation, and as Dr. Matthews has said, a perforation occurred in this city in the early days in the hands of a most competent surgeon, and a man who was daring enough to recognize the condition that had occurred and had ability sufficient to open the abdomen and close the rent in the gut successfully.

As to the method of Dr. Hanes, you introduce a tube into the anus, take out the obturator, and with the patient in the position he has described the air rushes in, distends the gut, and by gentle manipulation you can move the tube farther along, and if you desire to push the obturator beyond the point of obstruction, you can do away with any danger of dilating the gut. In case there are a number of polypi low down in the rectum you can detect them with the finger, but you can detect them much more easily by means of this instrument used in this way; you can snare them off or cauterize the base through the tube without doing a more radical operation, and all this can be done easily for the patient.

In making a diagnosis of amebic dysentery a number of stools may be examined without obtaining the ameba. If, however, the patient is suffering from amebic dysentery, upon examination of the gut through the instrument you may find red patches covered with a thick blairy mucus, which must be removed, and some of the tissue scraped out and examined under the microscope for the positive determination of the condition. This work is facilitated very materially by the position described by Dr. Hanes, and it is one of the great advances in surgery during the past decade.

The table he has shown is a simple arrangement of an apparently complicated affair. It seems to work beautifully, and while it will be

in use by many specialists, I do not think it will come into general use. The ever ready platform or table is very convenient both for the patient and for the practitioner.

The society owes Dr. Hanes a vote of thanks for presenting this paper and the motion pictures in connection with it, as well as for devising this means of examination.

In regard to Dr. Barkley's paper, there is some question as to what is conservatism in pelvic surgery. I do not believe it is conservatism in pelvic surgery to remove an infected tube distended with pus, and leave another one which is infected and not distended with pus. It is possible, if you take out the tube, a few months later you will have to do a secondary operation. There are many cases, it is true, where infection has subsided, or where there has not been infection present, where you can do a conservative operation. I recently had occasion in a young woman of thirty to remove half a dozen myofibromata from the uterus. She was anxious to have children. She had about six of these growths, only one of which was interstitial, the others being subserous, and the largest one was the size of one's fist, the second one the size of a small guinea egg. I removed all these by myomectomy, closed each opening, and the patient is making a nice recovery. Whether this will enable her to become pregnant or not, I do not know. It does not deprive her of her uterine organs which can functionate after this operation has been done. When we operate even in the presence of pus, it is a good idea to leave a small portion of the ovarian tissue to prevent the distressing early menopause which follows the removal of both tubes and ovaries. While most operators are inclined toward general conservatism, they should not carry their conservatism to a degree where it is dangerous and subject patients to further operations in the effort to make needless retention of organs which cannot be saved.

Cyrus Graham, Henderson: It is with sincere pleasure that I have heard Dr. Barkley's most interesting paper. It is a scholarly plea for conservatism along a line of work in which he has become thoroughly familiar during the past twenty years. With a ripe and mature judgment he elucidates facts and also presents a warning. I may not hope, nor should you expect me to add anything of great importance to a subject which he has so clearly and concisely spread upon the tablets of our memories.

I am in thorough accord with his teachings and believe that if all of our surgeons were as careful and scientific in their diagnosis and treatment as the essayist has been, our end results would bear closer scrutinization, and the material relations of many of our victims would be more pleasant.

The essayist says, "In the days of old there were men who were both radical and conservative,

both in their views and actions; and so it is to the present day." He might have added, like the poor we have the radical and conservative with us always. We could not get along without them. The radical injects some polyvalent serum into his patient or does an oophorectomy and says, "We are moving some!"

The conservative keeps his finger on the pulse, his ever-ready armamentarium of tried and approved methods at hand, and sees that we do not go too fast nor too far.

Some think there is no happy medium. That the ideal surgeon does not exist; or if he ever did exist he has passed to that heavenly bourne from which no surgeon ever desires to return—that he is either twanging a thoroughly aseptic harp above or manipulating a poker below. But let me tell you, gentlemen, that the ideal surgeon does exist. He is one the increase. He is not spreading his virtues across the billboards; but by his deeds ye know him to be the enucleated cell of the profession and just as necessary to humanity as the conservative or the radical.

He is the progressive outcome of years of antagonism between these two elements. The soft-pedal—the result of constant research, of unremitting toil of sleepless nights and weary days. Men like McMurtry, Schuchner, Abell, Vance, Frank and Barkley, are ideal surgeons made so by hard work and attrition of gray matter.

The conservative clings to his books and walks unquestioning in the old paths. Trying to convince him that he is only marking time, is like trying to convince Arthur McCormack the sanitary privy will not protect from the infection of the hookworm. His authorities say so and so, and he is content to do as those authorities said do.

While he may not accept the law, that "Whatever is, is right," still he is so far back in Missouri that his diagnosis and technique only change when the moon is full.

While he might in his young days have ripped around with old Hippocrates and canted with old Cantharides, he now looks askance upon the teachings of Koch, Virchow, and Eberth and regards the serum treatment as verging on quackery.

As from the North Pole all directions are south, so with him all changes savor of the charlatan, simply because they are changes. Then there is the other class. They are radicals with a push. They are as restless as gonococci the night after a Fourth of July picnic. With them the present is only useful, because it is the junction where they may change cars for the future. Success and their ideal lie just ahead and may be, a little off of the main line. Perfection is never attained, but about to be attained. "Get there" is their motto, and absolute results must come on the wings of the morning.

They are irreverent to what others deem sacred,

and recognize not the authorities which the conservative worship with sincere devotion. They would never canonize a priest into a saint, for with them nothing is worthy of the odor of sanctity that is not aseptic. With them the divinity that dare hedge a king must first be sterilized. They are the phagocytes of the medical profession and they attack, fumigate and sterilize not through malice, but because they wish to render the human system immune to the ptomaines of disease.

Their battle cry is not "Hold the Fort," but "Clean up the Fort!"

The world may accuse them of being quacks, of going about blazoning their ideas and their work across the horizon, so that he who runs may read, but be that as it may, they are often the hardy, insistent, antibodies and complement of ideal progression.

Both of these are partly right and both wholly necessary. Without the one there would be no progress; without the other there would be no stability.

The one is the concentrated extract of an intelligent energy that urges on the aseptic car of progress. The other is the leucocytes which regulate the corpuscles of speed.

Sometimes the juice gets weak, the hormones become sluggish, and we let things ramble along like a little old Ford on a country road, the profession becomes phlegmonous and sings even below the level of conservatism. Then again, the trolley slips off, the lash of scientific hope is plied too vigorously, and the streptococci of quackery flourish like the Green Bay tree of Friedburg's twilight sleep.

These two classes meet in surgery and their respective champions make the arena resound with the clash of "arms on armor clanging." They are foes so old that they imagine their antagonism natural and necessary.

The conservative sees in the radical a wild irresponsible wielder of the scalpel with a deft hand and a brass conscience—a surgical Ishmael whose greatest desire is to get hold of the other fellow's patients, infect them with the bacillus of his own superiority, place them upon the operating table, play tennis with their Fallopian tubes and golf with their appendices vermiformis.

The radical looks upon the conservative as a benign mossback, too slow to catch cold and too "set in his ways" to become infected with the bacilli of progress.

Both of these estimates are wrong. These two classes are to surgery what the Calvinists and Armenians are to theology. They fight over their beliefs while the brethren meander to the heated hence, in spite of creeds.

It takes both to make the exact complement. Antagonistic ideas make the world go round, and in the economy of life the radical and the conservative are both necessary. In spite of the con-

servative and the drapery of moss upon his back the world do move, and because of him it don't move more blindly and passionately.

Between the two, as between centrifugal and centripetal force, the profession moves on in a dignified way, without becoming either an old foggy or a roystering blade.

Bernard Asman, Louisville: A correct diagnosis—a diagnosis in which due regard is given to the relationship of the part affected to the other organs of the body and likewise their bearing to the diseased part—is always a first essential. Since this is an indisputable fact it naturally follows that whatever is helpful in reaching a proper diagnosis, be it a particular method, a special instrument, a certain posture, or what-not, merits our close attention.

Aside from certain fundamental principles which, necessarily, must be practically the same, diagnosticians may differ considerably in their procedure so long as they keep definitely in mind that for which they are seeking, viz.: the disease in its entirety.

It has frequently been said and is abundantly proven by experience that in no other part of the body are mistakes in diagnosis so often made as in the region of the anus, the rectum and the pelvic colon. The reason for this is not shrouded in mystery, indeed it is quite apparent and may be summed up in a few words—**lack of proper examination**. Even if the inverted posture, the knee-chest position, the digital examination, the use of the proctoscope or any other scope is a trifle disagreeable to the patient or a trifle irksome to the doctor, is that good and sufficient reason why an incipient cancer or other disease of the rectum or sigmoid shall go undiagnosed until it has become incurable?

By far the greater number of ano-rectal diseases encountered may be correctly diagnosed by external inspection coupled with digital examination, all that is needed being a rubber glove or finger cot and a good lubricant. This is best accomplished with the patient on a flat table, in the light as may be preferred. Of advantage frequently is the anoscope or anal canal speculum, Sims position, using either natural or artificial which may be used satisfactorily in the same position.

During this part of the examination the opportunity to ascertain the condition of the perirectal as well as the other pelvic structures through abdomino-rectal palpation should not be neglected.

Another posture, not put down in the books, but which has frequently been of the greatest advantage in my own experience, is what might be termed the "sitting" or "semi-sitting posture" and is easily assumed by the patient, if while still in the Sims position and with the buttocks projecting slightly over the side of the table next the

examiner, he is instructed to gradually elevate the head and shoulders aided by the examiner's left hand placed under the lower shoulder of the patient until the semi-sitting position is reached. The patient is then directed to "strain down" as in forced defecation when it is possible for the examining finger to reach a point much higher in the rectum than would otherwise be the case. Since it will probably not be denied that the "educated finger" is our best diagnostic instrument the advantages thus obtained are quite obvious. Displacements of the uterus, abscesses in the pelvi-rectal space, growths benign or malignant in the upper rectum, rectal strictures, etc, are thus brought within better reach of the examining finger.

As gravity aids in the inverted and knee-chest postures by allowing the pelvic viscera to sink forward and out of the way, so, too, in the semi-sitting posture gravity aids by bringing the pathology nearer the anal outlet thus greatly facilitating the digital examination.

When it becomes necessary to inspect the upper rectum and sigmoid—and this should be done in practically all cases before the examination is considered complete—a radically different posture is required; and here it is that a considerable difference of opinion is found amongst those who have done a great deal of this work. It would seem that it is largely a matter of personal preference, each one finding most advantageous that position which he uses oftenest and with which he is consequently most familiar. The essayist is convinced that the inverted posture is much the best, and he advances good argument to substantiate his views. Hirschman, of Detroit, and others recommend the exaggerated lithotomy position, which is really a Trendelenburg; with the thighs and knees flexed.

My own experience leads me to prefer, in most instances, the exaggerated knee-chest position. It meets all the requirements, when properly employed, and is not objectionable to the patient. Since examination of the upper rectum and sigmoid is nearly always preceded by a digital examination of the lower rectum it is quite easy and convenient for the patient, already in the Sims position, to assume the knee-chest posture. the exaggerated knee-chest, which permits the body to be inclined to a greater degree, or as much as is desired, is secured by tilting the table forward. The body weight is supported evenly by the chest and knees and the patient may remain comfortably in this position for as long a time as may be required.

Objection to the position on the part of female patients is not offered if proper drapery is employed. This is most conveniently secured by using a large sheet, covering the entire body, and having an elliptical opening—size to be controlled by drawstring or safety pins—thus exposing the anal region only.

Just one word of caution as regards all examination: In order to avoid mistakes in diagnosis it must be remembered that in many cases the proper interpretation of rectal symptoms and the proper estimation of rectal pathology cannot be made without due cognizance being taken of the condition of the other pelvic and abdominal structures.

Louis Frank, Louisville: I want, in behalf of the society and the State of Kentucky to claim priority for Dr. Hanes for this table and for this position. I do this because within the last two or three months there has appeared an article in the Chicago Medical Journal stating that this posture is new, but we know it has been used here since 1884, and the first publication of this is due to Dr. Hanes, who illustrated it in the Journal of the American Medical Association some eight years ago, but at that time very little or no attention was paid to it. And so it is due to our fellow townsman and citizen that this society should claim priority for Dr. Hanes.

With reference to the paper read by Dr. Barkley, it seems to me, to preach radicalism or operative procedures in one breath and then decry them in another, allowing these old inflammatory cases to go on for weeks and months, simply temporizing with them, is incompatible. I do not propose to express my own opinion at this time other than to say the two statements made by Dr. Barkley, if I understood him correctly, are not in accord. Radicalism may be ignorance; or conservatism may be ignorance. In my own mind I think radicalism very often is in the nature of conservatism. It depends upon what we mean by radicalism and conservatism, as various interpretations can be put on these two expressions, and they may be used to cover a multitude of sins, the cause of which in one instance is ignorance, and in the other stupidity.

J. G. Carpenter, Stanford: I would like to add to what I have already said, that I presented my paper at the Winchester meeting of this Association, June, 1886, and it was published in the Louisville Medical News, August 21, 1886; May 5-8, 1895, and then I asked Dr. Kelly to meet me in debate on sigmoidoscopy at Atlanta, Ga. In 1896 the article was brought before the American Medical Association, at Atlanta, Ga., surgical section. Prof. Kelly was conspicuous for his absence at that hour, and J. G. Carpenter the Kentucky backwoodsman, of Stanford, Lincoln county, Kentucky, was again honored and accepted as the author of sigmoidoscopy. Article published in the Journal American Medical Association, January, 1897. The Cincinnati Lancet and Clinic published my article on "Sigmoidoscopy," February 23, 1895.

P. H. Stewart, Paducah: It is certainly a great privilege as well as a pleasure to have an opportunity of listening to such a good paper as

has just been presented by Dr. Barkley, and the subject matter is of such great importance and far-reaching in its scope for usefulness or harm, that it could not, even if we desired, be permitted to pass without discussion.

I fully agree with Dr. Barkley in the statement, that more unnecessary surgery has been done in the pelvis than in almost the entire body, and I desire further to state that no field has been so thoroughly covered in surgical technic as has the pelvis. The efforts put forth in this region by surgeons within the past twenty years have in many instances proven failures, whether such efforts were made by a conservative surgeon or by a radical surgeon. If statistics were available, I doubt if conservative surgery would show a higher per cent. of cures than does radical surgery. Look back over your surgical record for the past twenty years, and enumerate, if you can, the number of women who are spending the remainder of their days confronting a partial or total invalidism following the efforts to save a partially healthy ovary, or look back if you will over your surgical history cases, and enumerate the number of your patients who have returned to the operating table the second time to have removed a pathological condition which at the time of the primary operation indicated the organ to be in almost a normal condition.

I fully realize and appreciate the high mortality which follows in the wake and pathway of surgery in acute pelvic conditions, and heartily agree with the essayist in his position on this point, and believe further that seldom, if ever, the surgeon is warranted in trespassing upon this field of pathology. In a large majority of cases of acute infection, in which surgery is resorted to, and a mortality results, a recovery, or a chronic inflammatory condition subject to a subsequent surgical procedure, would have been the result, if meddlesome, radical surgery had been withheld.

A pathological pelvic condition, associated with a neurasthenic condition, is one of the most difficult surgical problems with which the profession is confronted. How often do we see a woman with a previous neurasthenic history, complicated by a pelvic inflammatory condition, or some pathological condition of the pelvic organs, either a cystic degeneration of an ovary, or retro-displaced uterus, and how often do we fail in these conditions to effect a cure? The neurasthenic is probably the cause of more failures in pelvic surgery, whether radical or conservative, than most any other factor, and is a condition more often overlooked in your examination than any other one element. In these cases conservatism as well as radicalism only results in a failure, and a black mark against the surgeon.

Extra uterine pregnancy presents another field for argument, as to radicalism or conservatism, and whichever horn of the dilemma you may

choose: you may regret you did not accept the other. Many of our best operators of to-day advocate in extra uterine pregnancy, the resection of the normal healthy tube. I fully realize the number of cases of extra-uterine pregnancy occurring in the remaining tube, but even in the face of these conditions, in my judgment, it is worse than radical surgery it is criminal and unpardonable upon the part of the surgeon, to destroy the function of the remaining tube, and rob the woman of a possible subsequent pregnancy and probability of motherhood.

The wholesale removal of ovaries by incompetent surgeons just for the sake of adding to their list of ovariectomy can not be too strongly condemned, and it is in this operation more than all others that radical surgery has been resorted to. Yet, it is not at all infrequent that where the conservative surgeon has attempted to preserve a useful and functioning organ, his patient is again required to return to the operating table for the removal of the other ovary, which at the time of the previous operation to all out-side appearances, presented but little, if any evidence of a pathological condition, and a desire to protect her from the various phenomena, induced the surgeon to attempt to save the organ.

A. H. Barkley, (Closing): My paper was simply intended to impress upon the members the importance of being conservative where conservatism comes in. It is simply a question of knowing when conservatism ends and radicalism begins. It is just as necessary under certain conditions to know when conservatism can be properly undertaken as it is to know when radicalism should begin.

Prophylaxis of Venereal Diseases.—Balzar reviews the experiences in this line in different armies during the present and other recent wars. He emphasizes the responsibility of the military medical authorities in supervision and control of sources of possible infection, in early detection of infection, and most effectual treatment. His recommendations for abortive treatment are based on his long experience at the Saint Louis Hospital in Paris. He insists that a special record must be kept by the physician of each case of gonorrhea or syphilis, and an individual record given each patient which he should present to each physician to whom he applies. These individual cards might be utilized for brief instructions and warnings as to the gravity of the disease. As models in this line he cites the bulletins issued by the Societe de Prophylaxie asnitare et morale during the last fifteen years, and Guiart's recent work, "Syphilis et blennoragie."

ACUTE SUPPURATIVE CHOLECYSTITIS COMPLICATING TYPHOID FEVER.*

By JOHN W. PRICE, JR., Louisville.

Acute suppurative cholecystitis or empyema of the gall-bladder occurring during the course of typhoid fever is sufficiently rare and deadly to warrant careful consideration. The condition is one that demands immediate surgical treatment. It puts the attending physician's and surgeon's judgement to the severest test, for if we are to save these cases, an early recognition of the condition is imperative and there must be no delay after the diagnosis is made. To paraphrase the old saying "He who hesitates is lost" let us say if either physician or surgeon hesitates in diagnosing or treating this condition the patient is lost. If we may judge from the literature dealing with cholecystitis complicating typhoid fever the great majority of these cases have been overlooked until a perforation of the gall-bladder has occurred.

In 1908 Ashhurst analyzed all the reports, twenty-one, of operations on the gall-bladder done during the course of typhoid fever. His table showing the lesions found is as follows:

Cholecystitis alone, 4 cases, two recovered, two died, 50 per cent.

Cholecystitis and empyema of gall bladder, 3 cases no recoveries, three deaths, 100 per cent.

Cholecystitis empyema and peritonitis, 4 cases, two recovered, two died; 50 per cent.

Perforation of gall-bladder with peritonitis, 6 cases, four recovered, two died; 33 1-3 per cent.

Perforation of gall-bladder found at autopsy, 4 cases, 4 deaths; 100 per cent.

Total of 21 cases, 8 recoveries, 13 deaths; 61 per cent.

If we recognize the fact that in every case of perforation of the gall-bladder that the pathological lesion preceding it is a suppurative process then it is clear that the ten cases of perforations recorded in Ashhurst's list were not recognized during the suppurative stage. Certainly they were not treated during that period. The table shows seven cases

of empyema four of these were not recognized until peritonitis had developed. Only two of the seven recovered. The infrequency of gall-bladder involvement during the course of typhoid fever is illustrated by the reports of Thomas, who examined the records of 895 cases of typhoid fever; cholecystitis was recorded as a complication in twelve of these cases which is 1.3 per cent. Ashhurst found in 2864 cases of typhoid fever occurring at the Episcopal Hospital in Philadelphia during 1905-1906-1907 to October 1st, only 18 cases complicated by cholecystitis; that is .62 per cent. Four of the 18 died, only 2 of the 18 were considered serious enough for operative interference. Both were operated upon after perforation of the gall-bladder had occurred.

I was Resident Physician in the Episcopal Hospital in Philadelphia from May 1906 to August, 1908 and saw both of these cases before, during and after operation. One was operated upon in February, 1907, by Dr. G. G. Davis, and the other in March, 1907, by Dr. A. P. C. Ashhurst. These two cases stimulated the entire staff to be on the lookout for future gall-bladder complications during typhoid fever.

In 1907 Thomas collected from the literature, 154 cases of typhoid fever complicated by cholecystitis; perforation occurred in 39 or 25.3 per cent. Twenty-eight of the 39 died without operation. Of the 11 operated upon the mortality was 54.6 per cent.

In 1898 Keen and Westcott collected from the literature 30 cases of perforated cholecystitis; of these only 4 were operated upon, 3 of these 4 recovered and the others died. Therefore it appears that between 1898 and 1907, 9 cases of perforation of the gall-bladder complicating typhoid fever were reported. Of the 9, 7 were operated upon and 5 died.

Since January, 1908, we have been able to find in the literature the report of 8 cases of cholecystitis complicating typhoid fever which were operated upon. To this number we wish to add the report of one case which recently occurred in our practice. Of these nine cases all recovered from the operation; only one died, death in this case was due to an intestinal perforation which occurred eight days after the gall-bladder operation. The diagnosis

*Read before the Jefferson County Medical Society.

was made before operation in every case except one. The following are the cases referred to:

CASES	DIAGNOSIS	RECOVERED	DIED
1. E. M. Prince	Perforation of the gall bladder (Journal A. M. A., May 15, 1909)	1	0
2. E. M. Prince	Cholecystitic (Journal A. M. A., May 15, 1909)	1	0
3. *E. M. Prince	Acute Suppurative Cholecystitic (Journal A. M. A., May 15, 1909)	1	0
4. G. Worms and Hamant	Acute Cholecystitic (Arch. Gen. de Clin. VI, No. 2, Feb., 1912)	1	0
5. G. Worms and Hamant	Acute Cholecystitic (Arch. Gen. de Clin. VI, No. 2, Feb., 1912)	1	0
6. John McMillian	Acute Suppurative Cholecystitic (British Med. Jour., Jan., 1912)	1	0
7. W. A. Evelyn	Acute Suppurative Cholecystitic (British Med. Jour., May 1, 1912)	1	0
8. John M. Price, Jr.	Acute Suppurative Cholecystitic (Present Issue Ky. Med. Journal)	1	0

It is interesting to note that only two of these cases had a perforation in the gall-bladder and that Prince states in his case he operated ten hours after the initial pain. Erdman was called to see his case the following day.

We desire to call attention to the improvement of results in the treatment of this complication of typhoid fever since 1908. We think that these results are due to the early recognition of the gall-bladder involvement and to prompt surgical interference. In this series the gall-bladder was not given time to perforate except twice.

PATHOLOGY.

Acute suppurative cholecystitis developing during an attack of typhoid fever may be due to the invasion of the gall-bladder by the typhoid bacilli alone, or associated with other micro-organisms with or without the presence of calculi in the bile passages. Gilbert and Girode in 1890 were the first to demonstrate the presence of the typhoid bacillus in the gall-bladder. The case was one of suppurative cholecystitis.

The organisms may reach the gall-bladder (a) by ascending the common and cystic ducts from the duodenum, (b) by descending in the bile from the liver which has been infected via the portal circulation, (c) via the lymphatics, (d) via the blood supply to the walls of the gall-bladder.

Acute inflammations of the gall-bladder may be classified according to the severity of the involvement as follows:

(r). Acute catarrhal, in which the inflammation is severest in the mucosa, the muscular layer and the peritoneum being only microscopically involved. The gall-bladder contents are bile, muens, micro-organisms, desquamated epithelial cells and a few W. B. C. serum or a serofibrinous exudate.

(b). Acute suppurative cholecystitis or empyema of the gall-bladder: the mucous

membrane is red and ulcerated, the muscular coat is soft, swollen, oedematous and in the advanced cases very friable. The peritoneum, if seen within ten hours after the acute elevation of temperature, may be the color of a pearl,—almost white, only where it is attached to the liver will it be red. This pallor is due to the intense degree of oedema and internal pressure. If seen later, perhaps only a few hours, it may be a greenish-black, the color of strangulated gut. In the cases which develop more slowly it may be a dark red, covered with an adherent exudate. The contents are pus and micro-organisms mixed with muens and bile. If the gall-bladder is drained while the patient is living, the last dram or so will be blood-streaked.

Gall-stones may or may not be present.

(c). Gangrenous cholecystitis. This term implies that a portion of the wall of the gall-bladder is gangrenous. The entire organ may be involved. If only a small area is involved a perforation will occur, if the process is allowed to continue. The walls are soft, swollen, friable, edematous, infiltrated with blood and pus, purple in color and covered with lymph. The mucous membrane is edematous, ulcerated and necrotic. The contents of the organ are bile, pus, blood, mucous, micro-organism and broken down epithelial cells; gall-stones may be present.

We believe that gangrenous cholecystitis is an end result or a sequel to an acute suppurative cholecystitis.

INCIDENCE.

Cholecystitis complicating typhoid fever may occur at any time during the disease. It has been observed during the convalescence, but more commonly between the tenth and thirtieth day of the disease. Camac collected reports of 27 cases occurring between the 10th and 70th day of the disease.

Between the 10th and 30th day, 19 cases.
Between 31st and 50th day, 6 cases.
Between 51st and 70th day, 2 cases.

SYMPTOMS AND PHYSICAL SIGNS.

The most prominent symptom is the acute agonizing pain in the right side of the abdomen, especially in the region of the gall-

*This case No. 3 died eight days after operation from intestinal perforation.

bladder. It may radiate to the right shoulder. It is accompanied by nausea and vomiting, prostration, sweating, rapid pulse and respiration, rise of temperature, distention of the abdomen, rigidity of the abdominal muscles and general tenderness. The gall-bladder may or may not be outlined by percussion or palpated. The face is pinched and haggard, the eyes have lost their dull lustre. They are rather restless, anxious and pleading. Ashhurst observed that in some cases the onset of symptoms was gradual. We believe that when perforation is imminent there is a sudden increase in the pain, tenderness and rigidity. After perforation there is a temporary drop in the temperature followed by a rise. The pain is not so acute and not so well localized. The distention gradually increases and rigidity is about the same intensity all over the abdomen. Prostration is more marked. The cases reported by Williams and Shield, Alexileff, Osler and Ashhurst, had such symptoms, and operations showed a perforation in the gall-bladder.

DIFFERENTIAL DIAGNOSIS.

In considering these symptoms and physical findings we must bear in mind other conditions which produce the same symptoms and similar physical signs if we are to make a diagnosis. Let us remember duodenal ulcer, stomach ulcer, appendicitis, tubercular peritonitis, intestinal obstruction, perforation of the intestine, and inflammation of Meckel's diverticulum. In the 21 cases of cholecystitis (suppurative and perforative) which were operated upon and collected by Ashhurst, the diagnosis was made correctly in only 11. Perforation of the bowel was diagnosed 9 times and peritonitis once. Appendicitis was diagnosed twice by Osler and three times by Richardson. Intestinal obstruction was diagnosed once by Osler and suspected in two of Richardson's cases. We mention these errors in diagnosis which have been reported by two most skillful men to emphasize its difficulty. Osler says that local tenderness is extreme, but may be deceptive in its situation. We believe that percussion is a greater aid than palpation in localizing the point of greatest tenderness. Our method is to percuss systematically over the entire abdomen; for example over a line, passing through the gall-bladder from above, downward and over a second line, passing through the gall bladder transversely, and over similar lines passing through McBurney's and other anatomical points. In our case of acute suppurative cholecystitis our greatest tenderness was over the gall-bladder when we used percussion, but on palpation, the greatest tenderness was at McBurney's point. We think that an enlargement of the gall-bladder can be more surely

determined by percussion than by palpation. The finding of increased liver dullness in the region of the gall-bladder is suggestive that the gall-bladder is enlarged, though it may not be palpated on account of the muscular rigidity and abdominal distention.

It is difficult to analyze the symptoms which are common to so many conditions, and no attempt seems as yet to have been made to do so. We believe that, however, the symptoms are very well defined in each case of cholecystitis, appendicitis, perforation of the intestine, etc., before the onset of a general peritonitis. The symptoms differ in the degree of the intensity; for example, the pain and prostration seem greater in suppurative cholecystitis than in appendicitis, or intestinal obstruction until these are complicated by peritonitis. The prostration is more rapid too. Before a perforation occurs in the bowel or stomach, there are warning symptoms of localized pain and tenderness followed by a drop in the temperature, an elevation of the pulse rate, and a lessening of the pain after the perforation, to be followed later by the signs of a general peritonitis. The same is true in the case of duodenal or stomach ulcer, the previous history being significant.

The nausea and vomiting are more persistent and constant in suppurative cholecystitis than in any other lesion, except intestinal obstruction, or other conditions—suppurating cysts, etc., complicated by a general peritonitis. The pulse rate and respiratory rate and degree of temperature are not pathognomic.

TREATMENT.

In 1903 Erdman advised cholecystostomy or cholecystectomy in all cases of cholecystitis complicating typhoid fever, if the symptoms did not subside after thirty-six or forty-eight hours. It is our opinion that as soon as a suppurative cholecystitis is recognized the gall-bladder should be either drained or removed without delay.

We desire to report the following case of suppurative cholecystitis complicating typhoid fever in which a positive diagnosis was made before operation. Credit should be given to Dr. Irvin Lindenberger and Dr. Jas. Bruce and Dr. Phipps for their promptness in recommending surgical interference. The writer was called five and a half hours after the initial rise of temperature and saw the patient within an hour thereafter. Operation was advised and begun as soon as the patient and the operating room could be prepared.

Mrs. M. M., age 34, white, was admitted to the City Hospital, September 1, 1914. Family history negative for cardiac renal or nervous diseases, tuberculosis, cancer or other tumors.

Patient's general health had always been good. She had never had any disease of the gall-ducts or appendix or any acute painful abdominal condition.

Present Illness: Two weeks before admission patient states that she had had intense headache, backache, malaise, lassitude, extreme weakness and fever. She had been confined to bed for one week prior to admission.

Physical Examination: On admission, temperature 101, pulse 106, respiration 20. The heart and lungs were negative, spleen was enlarged and palpable, there were rose spots on the abdomen. Widal was positive, leucocyte count was 6000, blood culture was negative, urine showed slight trace of albumen. The temperature, pulse and respiration were as follows between September 2nd, and October 15th.

September 2-29, temperature 102 to 103 3-5, pulse 90 to 114, respiration 20 to 22.

September 29 to October 8th, temperature 102 to 99, pulse 90 to 130, respiration 20 to 22.

October 8-14, temperature 100 3-5 to 99, pulse 112 to 98, respiration 20 to 22.

On October 14th, 1914, the patient had an acute sudden, agonizing pain on the right side of the abdomen. It seemed greatest in the region of McBurney's point to which she pointed with her finger when asked to locate her pain. The pain was followed by nausea and vomiting. On this day the maximum temperature was 100 3-5, pulse 90, respiration 20. The vomiting was persistent the night of October 14th, and continuous during October 15th. At 3:00 P. M., October 15th, temperature was 102, pulse 140, (counted by Dr. Phipps) respirations 28. Examination showed marked rigidity of the abdominal muscles, and tenderness especially over McBurney's point. At 6:00 P. M., temperature was 101 4-5, pulse 140. She was vomiting continuously a dark, green vomitus, containing stomach and duodenal secretions, bile and a few food particles. The patient's condition during the next two hours was extreme. The prostration was very pronounced. The pulse was counted by the attending physicians as high as 160. The leucocyte count at 8:00 P. M. was 12,000. The attending physicians thought the patient was suffering with an acute involvement of the appendix or gall-bladder and believed that she was in need of immediate surgical attention. The writer was called and found the patient's condition as follows:

She was vomiting continuously during the examination. The forehead was covered with great beads of perspiration. The eyes were anxious, restless and pleading. The facial expression was that of one in great agony. Examination of the chest showed the lungs to be clear and the heart was regular. The

impulses at the apex were 140 to the minute. The abdomen was not distended. On palpation there was marked rigidity over the entire right side of the abdomen. The chief point of tenderness being over McBurney's point. The gall-bladder was palpable. It seemed only slightly enlarged. Percussion was then done over longitudinal and transverse lines passing through the gall-bladder, McBurney's and other anatomical points. The greatest point of tenderness on percussion was constantly over the gall-bladder. The liver dullness was increased at the site of the gall-bladder and we consider that this was due to the enlargement of the gall-bladder. After thorough consideration of the history and the physical findings, a diagnosis was made of acute suppurative cholecystitis, complicating typhoid fever. Immediate operation was advised as soon as the patient and the operating room could be prepared.

Operation by Dr. John W. Price, Jr.

An upper right rectus incision was made and the gall-bladder exposed and found to be about the size of a turkey egg. The internal tension was extreme. The color was that of a pearl, except at the attachment to the liver, it was red. There were no adhesions. Great care was used in placing packs around the gall-bladder before draining it, so as to protect the rest of the abdominal cavity from contamination with the virulent gall-bladder contents. The gall-bladder was then drained by inserting a trocar and canula. The contents were a creamy, brownish fluid, containing mucus and pus. The last portion expelled contained some blood. The odor was foul.

The wall of the gall-bladder was thickened, infiltrated, edematous and leathery. The blood supply seemed to be almost completely shut off at the fundus. Several seconds elapsed before the cut edges bled freely.

The opening in the gall-bladder was enlarged and gauze strips were inserted to completely absorb any fluid remaining in the gall-bladder. A search was made for calculi and none found. The cystic duct was palpated and found to be enlarged and rigid. A rubber drainage tube was inserted into the gall-bladder and secured by turning in the cut edges with the purse-string suture. A Mickulicz drain was inserted to the neck of the gall-bladder and another one at the fundus around the rubber drainage tube. The drains were brought out through the upper angle of the incision and the remainder of the incision was closed.

The culture made from the gall-bladder contents removed in the operating room, showed a pure growth of typhoid bacilli.

Post-Operative History: October 16th drainage from the gall-bladder was bile, temperature 98 4-5 and pulse 112.

October 17th, temperature 101 3-5, pulse 120, respiration 24.

October 18 to 21, temperature 98 3-5 to 100, pulse 100 to 110, respiration 23 to 24.

October 22 to 27, temperature maximum 99 3-5, pulse 100 to 108, respiration 20 to 22.

Blood Examinations: October 15, white blood cells, 12,000.

October 17, white blood cells, 14,200; lymphocytes, large 6, small 27; Polymorpho-nuclear leucocyte, 67.

October 20, white blood cells 10,800; lymphocytes, large 8, small 22; polymorpho-nuclear leucocytes, 70.

October 26, white blood cells, 11,000; lymphocyte, large 7, small 25; polymorpho-nuclear leucocyte, 66.

On October 20th the red blood cells were 3,500,000. October 29th, culture was made from gall-bladder drainage. Gram positive cocci in clusters and large gram positive bacilli (*S. P. Albus*, *B. Subtilis*) were found.

Cigarette drains were removed October 24th, nine days after operation, rubber tube was removed from the gall-bladder on October 26th, eleven days after operation. The silkworm gut sutures were removed on October 27, the wound had healed by first intention up to site of the fistula. On November 12th as there was only a slight bile stain discharge, the fistula being almost completely healed, the patient's general condition being excellent, she was discharged from the hospital.

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 Wescott—See Keen, p. 248.
 Worms, G. & Hamant—*Arch. Gen. de Chir.*, VI, No. 2, Feb. 1912. (*Abst. A. M. A.*)

Retention of Nitrogen in Chronic Nephritis.—Roehat and Hijmans have been investigating the urea content of the blood in 110 persons with healthy kidneys, as they describe in detail. The range was from 0.117 to 0.667. Computed by Ambard's formula, the range in 112 persons was below 0.09. Accepting 1.00 as the standard in health, not one of the healthy subjects surpassed this, while the patients with chronic kidney disease always gave a much higher figure, and the increasing urea content was always paralleled by aggravation of the clinical symptoms. The discovery of a high urea content often cleared up a puzzling diagnosis, before any definite symptoms of uremia became apparent. A number of experiences are related, all confirming the simplicity and reliability of the Ambard formula for sifting out the cases of kidney disease with retention of salt. This gives the clue to treatment and saves inflicting useless restrictions on the patients. With retention of nitrogen, of course, nitrogenous food should be restricted and the calories supplied in other ways. He lists for comparison some of the more common foods showing that 100 gm. each of sugar and butter represent 400 and 786 calories with no albumin; 100 gm. rice and berad, 253 and 235 calories with 7 gm. albumin; while 299 gm. potatoes represent 276 calories with 6 gm. albumin; 200 gm. green vegetables, 6 calories with 5 gm. albumin; 50 gm. meat, on the other hand, has 10 gm. albumin to 66 calories. Ambard's formula and the bases for it have been described in *The Journal of the A. M. A.*; one communication on the subject was published March 7, 1914, p. 813.

Toxins of Helminths.—Paulian injected guinea-pigs with alcoholic extracts of various intestinal parasites, including ascarides, oxyuris and tenia. Other tests were made with macerations of their bodies. He found evidences of severe toxic action, from congestion and hyperemia to actual degeneration of tissues, loss of resisting powers of the red corpuscles, intense anemia and eosinophilia. The nervous disturbances and even the eosinophilia may be regarded, he thinks, as phenomena of anaphylaxis. His findings confirm those reported by others except that he never detected the lesions described by Rachmanov in the nervous elements. The organs predominantly affected were the spleen, kidneys and liver, the latter showing fatty degeneration in one animal. The suprarenals were always hyperemic and with intertrabecular hemorrhages.

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NEXT MEETING STATE ASSOCIATION.
HOPKINSVILLE, 1916

COUNTY SOCIETY REPORTS

Barren—The Barren County Medical Society met in Glasgow, November 17, 1915. Members present, Turner, Miller, Botts, Biggers, Smock, Acton, White, Taylor, Siddens, Depp, Palmore, and Howard.

The society was called to order by Vice President Miller. The minutes of last meeting were read and approved.

Interesting clinical cases were reported by Drs. White, Smock, Botts and others, and the lively discussion which followed proved the deep interest awakened by the reports.

A. T. Botts, reported the following unique case: A woman past middle age, experienced difficulty in passing her urine, which the doctor thought may have been caused by paresis of the muscles involved in urination, or possibly a growth in the urethra. The trouble grew worse, and worse, and yet she was too modest to submit to a rigid examination. Necessity in her case was indeed the mother of invention. Reasoning from analogy, and remembering how she had seen milk drawn from the breast with a hot glass or bottle, she made the inside of a long glass very warm with hot water, and fitted it tightly over the meatus urinarius. Instantly the urine started, and the bladder was quickly emptied. She has repeated this procedure many times, and always with perfect satisfaction. Dr. Botts does not expect this plan to come into general use, but reports it merely to prove that "Truth is stranger than fiction."

C. C. Howard's paper on "Local Anesthesia" was well received and a motion carried that a copy be sent to the Journal for publication.

After arranging an interesting program for our next meeting, the society adjourned to meet December, 15, 1915.

J. MORGAN TAYLOR, Secretary.

Christian—The Christian County Medical Society met in regular session Tuesday, November 16th, in the City Court Room, Hopkinsville, with President Gates in the chair, and the following members present. Drs. Gates, Williams, Croft, Lovin, Durham, Keith, Southall, Rice, Paine, Stites, Barker, Harned, Bell, Caudle, Rozzell, Wright, Reynolds, Gaither, Sargent, Stoue, Grace, Jackson, Thomas, Lacy, Gower, Stephens, and Sandbach, and W. R. Davidson, of Evansville, Ind. and E. M. Sanders, of Nashville, Tenn., and W. L. Moore, of Hopkins county as visitors.

After the reading and adoption of the minutes of the last meeting the President called for volunteer contributions to pay an indebtedness of \$31.05 and the amount at once contributed.

Owing to our large program the report of cases and clinical cases were passed and the program called.

W. R. Davidson, of Evansville, read an excel-

lent paper on "Early Diagnosis of Tubercle." As this paper will appear in the Journal the secretary will not quote.

This paper was favorably and freely discussed by Drs. Barker, Rice, Bell, Caudle, Rozzell, Stites, and Durham.

W. L. Davidson, in closing, said: To meet with such a kind reception is worth two or three trips down here. I certainly have enjoyed the discussion. The tubercle in children is in the lymphatic system. If we wait for lung symptoms we are far advanced. What was once called early is now called late diagnosis.

E. M. Sanders, of Nashville, read an excellent paper on "A Plea for Efficiency in Small Town Hospitals." As this paper will appear in the Journal the secretary will not quote.

Drs. Davidson, Bell, Stites, Moore, and Gaither discussed the paper at length.

F. M. Stites offered the following resolution which was passed unanimously. We commend the City of Hopkinsville for its enforcement of the sanitary regulations and note with approval the improvement in the sanitation of the city.

We would respectfully urge on the new city government, taking office January 1st, 1916, that it continue and enlarge such sanitary ordinances as already exist, and,

We assure the city government the co-operation of this society in every effort to protect the health of the public.

This being the last program of the year and one of the best meetings we adjourned.

W. S. SANDBACH, Secretary.

Woodford—The Woodford County Medical Society held its November meeting in Midway on the evening of the 12th instant with Dr. Stedman occupying the chair. The following members were present: Drs. Anderson, Arnold, Blackburn, McCauley, Risque and Collette.

The meeting was devoted to consideration of means whereby Communicative Diseases may be better cared for, the public better protected and the State Board of Health kept in closer touch with the occurrence of such cases than heretofore. It is the sense of the Society that the public welfare demands that much closer attention be given this matter. A motion was adopted authorizing a committee of three to advise with the Fiscal Court in the effort to have a secretary to the County Health Officer appointed. It shall be the duty of this secretary to receive reports from all the physicians of the county relative to the existence of communicative diseases; to send notice of such diagnosis and the regulations necessary and obligatory in such instances, to the patient or family in which the disease exists; report to the State Board of Health, etc. The Court will be asked to grant this secretary a nominal salary and incidental expenses covering blank forms, postage, etc.

It is patent that too much negligence has existed in the past and this has probably been due to some extent at least to the attitude of the patients and families of patients of this class. They often object strenuously to quarantine and to proper after attention to fumigation, etc., and antagonize and severely criticize any physician who attempts to enforce proper regulations. This antagonism perhaps would be largely eliminated were notices sent from a secretary who is a member of the laity and the regulations made mandatory under the authority of the County Court. It will relieve any physician of responsibility for any blame and unkind feeling that is frequently engendered under present conditions. It will also have the much to be desired effect of directing the attention of those concerned in a more legal manner and create a greater consideration and respect for the proper restrictions that should be thrown about these cases, and to which so little importance is usually attached by the majority of the very ones to whom this should especially apply.

The society adjourned to meet in Versailles the second Friday in December.

WM. T. COLLETTE, Secretary.

Clark—Clark County Medical Society met November 9, 1915, and the Winchester Hospital question was again taken up. It was decided to push the campaign to raise the necessary funds for a hospital. About \$17,000 has already been pledged and the Fiscal Court has promised to donate \$5,000 when \$25,000 has been raised. A committee was appointed to confer with the Fiscal Court in an effort to have the \$5,000 paid when \$20,000 has been raised by public subscription. This committee is composed of Dr. J. W. Ishmael, Dr. Howard Lyon and Dr. I. A. Shirley. If the Fiscal Court agrees to this it will be an easy matter to raise the balance and it is hoped that work of the new hospital can be started by the first of the year.

The need of a roomy, public hospital for Winchester, is more forcibly emphasized every day. We now have two private hospitals, and both of them are doing much good, but they have been crowded ever since they were established and still many persons have been compelled to leave the city for attention.

It is hoped that this last campaign will be pushed through to a successful end and not be permitted to grow lukewarm as the other one was.

NEWS ITEMS AND COMMENTS

FIRST SUCCESSFUL FIGHT AGAINST HAY-FEVER.—WOMEN'S CIVIC LEAGUE ASSISTS.

After having started a campaign of public education in the United States, showing that hay-fever is due to the pollen of weeds and that fall hay-fever, the most common form, is due in almost all cases to the two varieties of rag weed, the Common Rag-weed (*Ambrosia Artemisiifolia*) found in the Middle and Northern States and the Giant Rag-weed (*Ambrosia Trifida*) more common in the moist lands of the Coast, the American Hay-Fever-Prevention Association has concentrated its first efforts in New Orleans with the first inning to its credit.

The public was first educated regarding the rag-weeds, so that they could be easily recognized. Illustrations of the weed were published in the Bulletin of the State Medical Board of Health and the public press, and the live weeds, in full development, were exhibited in the show-windows of the principal street.

The City of New Orleans, through the Commissioner of Public Works, placed at the disposal of the Association twenty convicts, who cleared the streets and sidewalks of the outer sections of the City of the weeds, in accordance with a map prepared by the Topographical Committee of the Association showing the areas infected with rag-weed.

The State Board of Health published the illustrations of the rag-weeds and abstract of the instructions for hay-fever sufferers, and the City Board of Health assisted by enforcing the cutting of weeds on vacant lots. The Commissioners of the various Parks had the rag-weeds destroyed in the Public Parks under the direction of the Association.

Valuable assistance was given by the Women's Civic League, which appointed a special Committee on Vacant Lots. This Committee made arrangements with labor bureaus so that they not only reported lots infected with weeds but offered to send workmen to cut them at low rates.

The storm of September 29th, completed the fall work of the American Hay-Fever-Prevention Association in New Orleans by almost entirely destroying the leaves and flowers of the Giant Rag-Weed in exposed places. As a result of this, and the efforts of the American Hay-Fever-Prevention Association, Hay-Fever in New Orleans practically disappeared several weeks earlier than the usual time. As there are about 5,000 hay-fever sufferers in that city, the health and economic value of this can easily be estimated.

Dr. W. Scheppegrell, President of the American Hay-Fever Prevention Association states that what has been effected in New Orleans can be done in all other towns and cities, and efforts in this direction will be started in the Spring.

Hay-Fever is a distinctive preventible disease, and Dr. Scheppegrell believes that in a few years cases will become rare. The length of time will depend upon the degree to which localities are infected with the hay-fever-producing weeds and the energy of the people in destroying them.

In some of the smaller towns, especially those catering to summer visitors, this will probably be accomplished before next Summer. The statement that a town is free of hay-fever will prove an advertisement, that will easily repay the cost of destroying the hay-fever-producing weeds.

The Lincoln County Medical Society met in Crab Orchard, Tuesday October 19th, 1915, at 10 a. m., at the office of Dr. Harmon.

In the absence of the president and secretary, Dr. O'Bannon was elected chairman pro tem and Dr. Harmon secretary.

Dr. L. F. Jones was the first essayist, subject, "The Prevention and Treatment of Puerperal Eclampsia." An interesting elucidation was presented, giving the up-to-date views of many distinguished authors as well as his own valuable experience. He dwelt specifically upon albumen-uria and urea, especially the latter, in the form of uremia as being a great factor in the pathology of eclampsia. The paper was highly instructive, full of scientific facts. Discussions were made by Drs. Harmon, Edmiston, O'Bannon, Southard, Jones and Carpenter. Dr. Harmon was the second essayist, subject, "Tonsillitis." He gave the many causes of the disease, differential diagnosis between tonsillitis, croup, diphtheria and phlegmonous inflammation of the palate and tonsil, morbid anatomy and local and constitutional treatment. These essayists proved themselves worthy of the honor bestowed upon them by appointment. Drs. O'Bannon, Edmiston, Jones, Southard, Carpenter and Harmon made instructive discussions.

Dr. Carpenter made a talk on Instrumental Delivery with presentation of a complete obstetric "outfit" of surgical instruments, describing their use in certain indications. The day was a most enjoyable one. An elegant dinner was served at the Hiatt Hotel by the Crab Orchard confreres.

This society was a post-graduate course for one day and what those present gained in knowledge and wisdom, the absent ones lost. When doctors fail to attend their county and

state medical societies, they soon become back numbers and never keep up with the van of the profession.

Dr. Pipes, of Moreland, was appointed essayist for next meeting, subject, "Complications and Treatment of La Grippe;" Dr. Childress, "The Causation, Diagnosis and Treatment of La Grippe;" Dr. Chase, "Fractures of the Forearm;" Dr. Weddell, "Etiology, Prevention and Treatment of Whooping Cough." Vote of thanks was extended to the local profession of Crab Orchard for many courtesies and royal entertainment. The society adjourned to meet at Hustonville, the second Tuesday in November regardless of the condition of the weather. Each essayist has been highly honored by appointment to do his best in having a full scientific program, and no excuse will be accepted should anyone fail to do his duty to himself, society and humanity.

Strong resolutions condemning the action of Police Judge John J. Riley in dismissing the Dr. Goodrich case and for failing to take proper action in numerous other matters presented to him by the City Board of Health, and declaring that he "Should not only be removed from his present office of Judge of the City Court but should be refused the suffrage and support of all citizens who have the private interest of their families and the public interest of their city at heart," were adopted by the Fayette Medical Society at a largely attended meeting of that body, held in the private dining room of the Phoenix hotel last evening.

About fifty representative physicians and surgeons attended the meeting, and there was a full and frank discussion of the Goodrich case and the other cases which have been taken before Judge Riley in the police court.

The meeting of the society was behind closed doors. A number of speeches were made prior to the passage of the resolution, among those taking part in the discussion being Dr. David Barrow, Dr. John W. Scott, Dr. J. A. Stucky, Dr. F. H. Clarke and Dr. J. B. Taulbee.

The resolution was passed by practically a unanimous vote, there being only one of the physicians present voting in the negative. When this physician, whose name was not made public, indicated that he could not endorse the resolutions, he was given the option of bringing in a minority report, but later declined to do so, saying that he would simply vote against the resolutions as submitted and let it go at that.

Following the adjournment of the meeting, Dr. L. C. Redmon, secretary of the Society, gave out a statement of the proceedings, to-

gether with a copy of the resolutions condemning Judge Riley's administration of the police court and calling upon the voters of Lexington to accomplish his defeat at the polls in November. The resolutions follow:

THE RESOLUTIONS.

"Whereas, the Board of Health of the city of Lexington, composed of members who receive no other reward for their service than a knowledge of duty well done, have for years studied the health problems of our city, and have had the Board of City Commissioners pass a health code modeled after the best health codes of this entire country.

"And whereas, John J. Riley, Judge of the City Court of Lexington, Ky., has invariably dismissed all cases tried before him under the health code, and by his actions has almost entirely prevented any enforcement of this code.

"And whereas, this body of physicians and surgeons is more directly interested in the health of this community than any other body or organization of men in the city, and realize because of their training, the immense importance of a strict and rigid enforcement of the health code, and do most heartily endorse the splendid work of the Health Board of the city.

"Therefore, be it resolved, That we, the physicians and surgeons of the city of Lexington, do condemn the action of John J. Riley, as Judge of the City Court, trying cases of violation of the health code, and do go on record and declare that in our opinion John J. Riley, as a public officer of the city of Lexington, is a menace to the public health and welfare of our city, and believe that he should not only be removed from his present office as Judge of the City Court, but should be refused the suffrage and support of all citizens who have the private interest of their families and the public interest of their city at heart.

"Also be it resolved, that our action in this matter is taken as a matter of duty, and regret exceedingly that we, in our opinion, feel that it is necessary, but believing as we do, we hope that the good citizens, both white and colored, will aid us in our efforts to eliminate John J. Riley, Judge of the City Court of Lexington, from participating in the management of the affairs of the city of Lexington.

"DAVID BARROW,

"J. A. STUCKY,

"JOHN W. SCOTT,

"GEO. P. SPRAGUE,

"J. T. McClymonds."

Programs for the forty-fifth semi-annual meeting of the Southwestern Kentucky Medical Association, to be held at Barlow, Ballard county Tuesday, October 26, have been

printed and distributed among the members by the secretary, Dr. J. T. Reddick. The semi-annual meetings of the association are usually good working meetings, devoted entirely to scientific interest and a number of good papers have been promised.

The Ballard County Medical society will entertain the delegates. The committee in charge is composed of Drs. J. S. Johnson, W. A. Page, J. W. Meshew and J. D. Rollings.

Dr. John L. Dismukes, of Mayfield, will preside over the meeting which will be called to order at 10.30 a. m. The Rev. J. T. Bagby will pronounce the invocation while the Hon. M. C. Anderson will deliver the address of welcome. The president will name the "best looking" member present to respond to the welcome address.

The program follows:

"Some Surgical Experiences. Are They Worth While?"—Dr. Bob Overby, of La Center.

"Treatment of Pnenmonia"—Dr. W. G. Kinsolving, of Eddyville.

"An Interesting Surgical Case"—Dr. Frank Boyd, of Paducah.

Intermission for lunch. (Courtesy of the Ballard County Medical Society.)

"Some of the Things a County Health Officer Should Do."—Dr. C. E. Kidd, of Paducah.

"Pituitrin and the Importance of Proper Administration."—Dr. J. S. Johnson, of Barlow.

Volunteer papers.

Reports of cases.

The officers of the association for this year are as follows: Dr. Jno. L. Dismukes, of Mayfield, president; Dr. W. F. Peebles, of Clinton, 1st vice president; Dr. W. Z. Jackson, of Arlington, second vice president; Dr. J. T. Reddick, of Paducah, secretary; Dr. H. G. Reynolds, of Paducah, treasurer; Dr. R. T. Hoeker, of Arlington, Historian.

The program sent out conclude as follows:

"Now, doctor, lay down your medicine case, your obstetrical satchel and your operating case, take a day off, go to Barlow, enjoy the hospitality of the citizens of that thriving town and manifest your appreciation of the entertainment which will be given by the Ballard County Medical Society.

IMPORTANT TO EYE AND EAR SPECIALISTS.

The following letter was sent to a number of specialists throughout the state. We are sure that there are others to whom we have failed to address letters, who would, nevertheless, be heartily welcomed by us. We hope by the publication of this letter to reach every

specialist in the State and hope they will consider this an invitation just as though the communication were a personal one. Not only are we anxious to have the specialists visit our meetings and take part in our proceedings but we will also welcome any practitioner who will honor us with his presence.

Dear Doctor:

You probably are aware that the eye, ear, nose and throat specialists of this city formed themselves into a society about three years ago. It is a fairly active body, and we have in a modest way tried to benefit each other and ourselves by meeting once a month for the discussion of short practical papers and reports of cases.

At the last meeting, we determined upon a fixed program for the present season and also decided, by unanimous consent, to invite our colleagues throughout the State. The symposium at each meeting is to consist of short papers.

We will be very happy to have you attend our meetings and participate in the proceedings.

Inclosed you will find program which has been arranged to include our June meeting. No meetings are held July and August. We will appreciate a word from you indicating whether you can give us the pleasure of your attendance, if not monthly, at any rate, as often as you can find it convenient to come.

The thought has occurred to us that such meetings may culminate in the organization of a State society of specialists in our line. We would like also to hear your expression on this question—whether you think the time ripe for the formation of a successful State society.

The meetings are always held on the second Thursday of each month at 8 P. M., at the Louisville Public Hospital.

Hoping to receive a favorable reply from you,

Very truly yours,

I. A. LEDERMAN, President.

C. W. KELLY, JR., Secretary.

PROGRAM LOUISVILLE EYE AND EAR SOCIETY, LOUISVILLE, KY., 1915.

November—Catarract Operation.

1. Dr. S. G. Dabney—Preparation of Patient, Operative Area, Anesthetic, Section.
2. Dr. Wm. Cheatham—Types of Operation.
3. Dr. Austin Funk—Accidents During Operation.
4. Dr. S. B. Hays—After Treatment, Complications.

December—Acute Mastoid Infection.

1. Dr. G. C. Hall—Diagnosis, Bacteriology, Prognosis.
2. Dr. J. H. Hester—Methods of Operation.
3. Dr. C. W. Kelly, Jr.—Complications and After Treatment.

January—1916—Diseases of the Nasal Ac-

cessory Sinuses.

1. Dr. W. J. Leach—Diagnosis, Differential Diagnosis, Bacteriology.
2. Dr. I. A. Lederman—Relation To Eye, Cranial Cavity, and General System.
3. Dr. J. R. Peabody—Treatment, Medical and Surgical: Local and General.

February—Glaucoma.

1. Dr. W. D. Levi—Differential Diagnosis, Pathology, Symptoms.
2. Dr. H. L. Pelle—Medical Treatment, Local and General.
3. Dr. A. O. Pfingst—Choice of Operations.

March—Deviation of Septum.

1. Dr. J. M. Ray—Indications for Operation. Etiology.
2. Dr. G. Robertson—Descriptions of Operation.
3. Dr. Jos. Shafer—Errors in Technique and Complications.

April—Strabismus.

1. Dr. J. H. Simpson—Etiology.
2. Dr. P. R. Taylor—Non-Operative Management.
3. Dr. S. W. Weinberg—Operations and Indications.

May—Throat Infections and Vaccine Therapy.

1. Dr. Wm. C. White—Types of Infection Seen in the Throat.
2. Dr. C. T. Wolfe—Status of Vaccine Therapy in Ear, Nose and Throat.

June—Dacryocystitis.

1. Dr. J. R. Wright—Acute: Symptoms and Treatment.
2. Dr. J. J. Wynn—Chronic: Symptoms and Treatment.

Dr. and Mrs. M. E. Alderson have returned from Dallas, Texas.

Dr. and Mrs. J. W. Ellis have returned home after spending several weeks in Philadelphia and other eastern points.

All of the 10,000 school children in Lexington public schools, who are not able to pay for dental work are to have their teeth treated free, by order of the board of education which at its meeting established a free dental clinic.

Dr. J. E. Wells, for years coroner of Lewis county, died at his home after a long illness, but only bedfast a short time. He was one of the foremost physicians of Northwestern Kentucky.

Dr. J. M. Wells, an eminent physician and churchman, aged about 69 years, died at his home in Vanceburg, Wednesday afternoon of last week. He was one of a family of eight children, all of whom have lived to be more

than 65 years of age. He leaves no family, except his wife, formerly Miss Anna Mains, of Brooksville, Ky., a woman of rare intelligence and culture. Dr. Wells was an uncle of Dr. J. E. Wells, of Cynthiana.

Dr. Gilbert L. Bailey, of Chicago, purchased recently the beautiful estate known as the Higginbotham farm, lying about two miles from Lexington on the Newtown pike. The farm, which was owned by W. D. Jones, of Newbern, Tenn., consists of 144 acres of fine land, a splendid residence and excellent out-buildings.

Dr. Bailey, who is a well-to-do retired physician, has been seeking through the South for several months for a pleasant country home, his choice being finally narrowed to the Kentucky bluegrass section and the Shenandoah valley of Virginia, the farm purchased yesterday being in the end chosen as most attracted as suited to the taste of himself and Mrs. Bailey.

Possession will be given on March 1, when Dr. Bailey will move here with his family. He expects to stock the farm with high grade dairy cattle. The sale was made through Clay & Norman, the consideration not being made public. It is understood, however, that the price paid does not indicate any depreciation in the value of Fayette county farm realty. Dr. and Mrs. Bailey have spent some time in Lexington recently and have met many friends who are pleased to learn that they have determined to locate here. They have one son who is in school in Cincinnati.

The regular meeting of the Montgomery County Medical Society was held at the office of Dr. R. E. May. There was a good attendance. The hospital movement was the subject of discussion, and every physician in the city was present, with something to say for the movement. It was decided to send a committee of physicians to Harrodsburg soon to investigate the hospital at that city. The medical society is deeply in earnest regarding the hospital and say that they propose to see it built within the next year and that there shall be made known as soon as it is settled as to what kind and what size hospital will be built here.

BOOK REVIEWS

The Medical Clinics of Chicago.—Volume I, Number 2, (September 1915). Octavo of 194 pages, 44 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Published Bi-monthly. Price per year. Paper, \$8.00. Cloth \$12.00.

A few of the most important chapters are one on Tuberculous Meningitis, Heart Disease in Pregnancy, Infantilism, Splenic Enlargement, Tubercular Pleurisy, and Carcinoma of the Stomach.

Materia Medica and Prescription Writing.—By Oscar W. Bethea, M. D., Ph. G., F. C. S. Published by F. A. Davis Company, Philadelphia.

This book gives a list of the most valuable and used drugs, names the preparations of each and gives a number of prescriptions containing this drug in combination with others for different effects. It is extremely useful as a reference book to students and practitioners.

Diseases of the Nose and Throat.—By Algeron Coolidge, M. D., Professor of Laryngology in the Harvard Medical School. 12mo of 360 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$1.50 net.

This little book is entirely for reference as to the methods of examination of the upper respiratory tract and for the treatment of such conditions as may be found. It does not aim to present fully and completely the subject, and for that reason will be found of value as a reference.

Gynecology, Volume IV of the Practical Medical Series.—Published by The Year Book Publishers, Chicago. Price \$1.35.

This volume will be found valuable for the treatment of displacements and injuries, if for no other subjects treated in the volume, and the rest of it is up to the usual standard of efficiency.

A Synopsis of Medical Treatment.—By George Cheever Shattuck, M. D. Published by W. M. Leonard, Publisher, Boston.

This book of 180 pages gives the principles of treatment for a great list of common diseases, including the management and administration of drugs, lists a number of the important drugs and indicates their use.

A Text-Book of Pathology.—By Alfred Stengel, M. D., Professor of Medicine, University of Pennsylvania, and Herbert Fox, M. D., Director of the Pepper Laboratory of Clinical Medicine, University of Pennsylvania. Sixth Edition, Revised. Octavo of 1045 pages, with 468 text-illustrations, many in colors, and 15 colored plates. Philadelphia and London: W. B. Saunders Com-

pany, 1915. Cloth, \$6.00 net, Half Morocco, \$7.50 net.

This is the sixth edition of this popular book and it is difficult to see how the subject of pathology could be handled in a more up to date, comprehensive, and satisfactory manner. It is useless to specialize on certain chapters of the book, as this would give but an imperfect idea of its worth. It is unqualifiedly recommended for those who desire standard authority on pathology.

Principles and Practice of Obstetrics.—By Joseph B. DeLee, A. M., M. D. Professor of Obstetrics at the Northwestern University Medical School. Second edition, thoroughly revised. Large octavo of 1087 pages, with 938 illustrations 175 of them in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$8.00 net; Half Morocco, \$9.50 net.

This is the second edition of this entirely practical and thorough going book. The illustrations are well worth its price, and the exhaustion of the first edition in so short a time has been an indication of the popularity which it deservedly received.

Syphilis As a Modern Problem.—By William Allen Pusey, M. D., Professor of Dermatology in the University of Illinois. Published by the American Medical Association, Chicago.

In this monograph there is considered the subject of syphilis from the standpoint of the problems of the disease as they affect the individuals of society, and not from the standpoint of the problems of the physician in the treatment of it; and it is therefore of interest to the layman as well as to the physician. It is a pity that the facts outlined in this book cannot be made general knowledge when the control of this terrible scourge would be rendered easier.

The Starvation Treatment of Diabetes.—By Lewis Webb Hill, and Rena S. Eckman. Published by W. M. Leonard, Boston.

This gives in detail a number of menus, the value of each, and their relation to the elimination of sugar, and the control of the disease. It is a book of sixty-six pages and it would be difficult to find as useful a book as this when you are treating diabetes.

International Clinics, Volume II, Twenty-Fifth Series, 1915.—Published by J. B. Lippincott Company, Philadelphia. Price, \$2.00. Some of the important chapters under Diagnosis and Treatment are Gonorrhoea: Its Complications and Sequelae, Ataxia, Therapeutic Technique. Under Surgery there is a chapter devoted to War Experiences, and Traumatic Injuries of the Nose and Their Treatment. The whole volume is well worth while.

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EDITORIAL

THE ALL-TIME HEALTH OFFICERS BILL.

The All-Time Health Officers Bill is Senate Bill Number 5, and House Bill Number 230. It was introduced by Senator Glenn, and is exactly as it was agreed upon at the Conference of County and City Health Officers, in Louisville. If health work in Kentucky is to be done along modern practical lines, we must have a whole-time man in every county, or in the poorer and more sparsely settled counties, in every district of two or more counties, who can devote his entire time to carrying the facts already known to us to others, where preventable disease exists.

The All-Time Health Officers Bill was introduced in the House by Mr. Dowling, and is to have strong backing from the start. We trust every physician in the State has already expressed himself to his senator and representative. If anyone has not done so, now is the time. It is important to remember that no change is made in the appointment of the health officer, who will be selected by the local board of health, just as he has been for the last thirty-six years; and, of course, under our democratic form of government, the salary must be fixed by the fiscal court, but careful safeguards are thrown around this provision so that the salary will be reasonable and at the same time not burdensome to the people of the counties. All the members of the Legislature want, is to know that the Bill is all right, and it will go through.

A BILL TO PREVENT BUYING AND SELLING OF PATIENTS BY PHYSICIANS.

Under this very strong title, Senator B. M. Taylor of Green County, has introduced a most timely bill in the General Assembly. It will be known as Senate Bill Number 96. It is most important that the reputable physicians

of the State see that the members of the House and Senate are made acquainted with the contents of this bill. It is to prohibit the division of fees between the general practitioner and the specialist. The bill is practically the same as the new law in Alabama. It is most drastic in its provisions, and will effectively break up this dishonest practice, which is a disgrace to any doctor who participates in it. No member of the Kentucky State Medical Association can be guilty of this practice without violating its By-Laws and the Association as a whole will be heartily in favor of the proposed legislation, so it will get the crooks outside of organized medicine, who are bringing the whole profession into disgrace. We congratulate Senator Taylor on the authorship and introduction of the bill, and trust that in our next issue we can say that it is a law.

OPTOMETRY BILL.

Senate Bill Number 50 is our old familiar friend, the bill creating a board of examiners in optometry. Of course we all know that the present law fully covers this subject, but in order to settle the matter finally a substitute optometry bill will be introduced, providing for the licensing of competent opticians by the State Board of Health under proper restrictions. Be sure your Senator and Representative understand the false pleas of the optometrists. Make clear to them the danger of ignorant or poorly taught men making examinations of the eyes. This is all that is needed to defeat Senate Bill Number 50.

POISONOUS FLY PAPER.

The *Journal of the Michigan State Medical Society* calls attention to a number of cases of the arsenical poisoning of children from accidentally consuming the contents of fly destroying contrivances, during the summer of 1914 and 1915. During 1915, twenty-two cases occurred, eight of which were immediately fatal, and the recovery of four was re-

ported as doubtful. As this report seems to have been secured from press clippings, it was necessarily inexact, but it is an indication of a possible extent of a wholly preventable danger. The *Michigan Journal* well says: "We again point out the fact that the symptoms of arsenical poisoning are very similar to those of cholera infantum and that undoubtedly a number of the cases of cholera infantum that occurred were really cases of arsenical poisoning, and death if occurring, was attributed to the fact. The cases reported were of children ranging in age from one to six years. These little patients are not old enough to tell what they have taken when questioned as to their illness and unless they are seen consuming the fly poison the actual cause of their sickness or death is overlooked and the fatality ascribed to cholera infantum or to some other similar causes and the error in diagnosis goes undetected.

"We repeat, arsenical fly destroying devices are dangerous and should be abolished. Health officials should become aroused to prevent further loss of life from this source."

DO YOU WANT ANYTHING?

The JOURNAL is constantly on the lookout for something else it can do for its readers that would help to make it of greater value to them. In our advertising pages in this issue we are publishing Bulletin No. 1, and this editorial is written to call your especial attention to it. Our Chicago representative is the Cooperative Medical Advertising Bureau. Its address is 535 North Dearborn Street, Chicago. It has agreed to answer any inquiry from this JOURNAL about pharmaceuticals, surgical instruments, and other manufactured products, such as soaps, clothing, automobiles, and anything else you may need in your home, office, sanitarium or hospital. Of course the readers of this JOURNAL understand that our advertisers are all right and that they can get many things from them. There are still things, however, of general use in the home that are not advertised in the JOURNAL, and it is to give them an opportunity of placing themselves on the right track about these things that this new activity has been started. We will appreciate hearing from our readers at any time and on any question and will enable us to give better service either to them or to our advertisers.

If you are interested in this idea, write a letter of inquiry to some of our advertisers while the matter is fresh in your mind.

DEFINITE DEATH CERTIFICATES.

Make your death certificates definite. The Director of the Bureau of the Census at Washington is now attempting to classify deaths from cancer. Where it is possible to do it differentiate between carcinoma and sarcoma. When your diagnosis has been based upon microscopic examination, indicate this in the certificate. The cancer problem is a large one, and every physician wants to do his share in its solution. The first definite thing to do is to find out where our cases of cancer are occurring and the particular variety with which we have to deal. If every practitioner will do his share in this, we will have made a distinct step forward and it is important that the medical profession of Kentucky be the first to make their death certificates definite.

UNITED WE STAND, DIVIDED WE FALL.

Dr. W. J. Gerding, of Newport, responded to a toast under the above title at the annual banquet of the Campbell-Kenton Medical Society on January 13, 1916. We hope every doctor in Kentucky will memorize it, and what is far more important, live it.

Around this festal board I see,
Many Doctors good and true;
Men who stand for what is right,
And nothing else will do.

The time was, when doctors would not meet
Together on common ground;
Today things have changed to a great degree,
Witness them gathered around.

What brought about this wonderful change
That permits of such a thing?
I'll tell you in a little while,
And it will be interesting.

The change was gradually brought about
And did not come at once;
You see such things require some time,
If its not to be for nounce.

We're working for the same great cause,
Our sympathies must be one;
Without this unity we must fail
To accomplish the great work begun.

We're still on the surface and not very deep,
The earth is rich below;
To get down where the pay dirt lies,
We must work together you know.

By working in harmony much good can be done,
While discord brings defeat;

So together we must pull one way,
Either up or down the street.

It makes little difference what 'pathy we are,
We're here for just one thing;
To put an end to "disease's regime"
So that health will reign as King.

Now, how can we do that my dear friends
With competition so keen?
Of course 'tis hard, but it can be done
If the cause we'll but esteem.

The cause as you know is a noble one,
None nobler does exist;
So let's lay aside petty jealousies,
And work with honesty and zest.

By getting together on common ground
And our differences explain,
We'll soon find out where we were wrong,
And for each, much will be the gain.

And still much more will be done;
If the members work as they always have,
Organization brought this all about,
I'm sure the great battle will be won.

Not alone from a business but from a social stand-
point,
Indeed, much will be our gain;
Our lives will become more beautiful
If from sarcasm we'll but refrain.

If we desire to cement this friendship,
The Golden Rule we must apply;
Otherwise the brotherly spirit
And good fellowship will soon die.

And now in the end, I would like to advise
Those present, one and all;
Kentucky's grand motto to adopt,
"United We Stand, Divided We Fall."

Atrophy of Muscles in Wounded Soldiers.—

This communication refers to trophic disturbances in muscles which apparently have little or no connection with the wound. An illustrated description is given of four typical cases. The atrophy develops independent of any detectable lesion in the central or peripheral nervous system, and seems to be the result of nutritional disturbances in the muscle, primary or secondary to some reflex irritation. The men had all been wounded but at some point more or less remote from the scapular region which was the usual site of the muscular anomalies. The ultimate outcome is a question which time alone can answer.

OFFICIAL ANNOUNCEMENTS

A BILL TO PREVENT DIVISION OF FEES.

The following excellent Bill is Senate Bill No. 96, introduced by Senator Taylor, of Green County, and House Bill 183, introduced by Mr. Dowling of Anderson County.:

An act to prohibit the buying or selling of patients by physicians or surgeons or other persons, and to define what shall constitute the buying or selling of patients and to fix the punishment for violation of this Act.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF
THE COMMONWEALTH OF KENTUCKY:

Sec. 1. That hereafter any physician, surgeon, or any other person who carries, sends or is in any manner instrumental in causing a patient to go to another physician or surgeon for surgical operation or advice as to, or treatment of, any physical or mental disease, injury or ailment and receives therefor from such other physician or surgeon and money, gift or other thing of value for such patient or who has any agreement or understanding with such physician or surgeon to receive therefor any money, gift or other thing of value whatsoever from such physician or surgeon, without the knowledge and consent of the patient, shall be guilty of selling the patient within the meaning of this Act.

Sec. 2. That hereafter any physician, surgeon, or any other person who knowingly receives any patient so carried, sent, or caused to go to him for any surgical operation, or advice as to, or treatment of, any physical or mental disease, injury, or ailment, and such physician, surgeon, or other persons pays any money, gift, or other thing of value, or promises any compensation whatsoever therefor, to such physician, surgeon, or other person so sending or carrying such patient to him, without the knowledge or consent of the patient, shall be guilty of buying the patient within the meaning of this Act.

Sec. 3. That any person who buys or sells a patient within the meaning of this Act so defined in the next preceding section hereof, shall be guilty of a misdemeanor, and, upon conviction, shall be fined for the first offense not less than \$50 nor more than \$100, and, upon conviction of the second offense, he shall forfeit his license to practice medicine and surgery in this Commonwealth. The court so trying such case shall, upon conviction, declare the license of such physician or surgeon to practice medicine or surgery in this Commonwealth cancelled, and such license so cancelled shall not be renewed in this Commonwealth.

ORIGINAL ARTICLES

DIGITALIS; ITS INDICATIONS AND USE.*

By W. W. ANDERSON, Newport.

Outside the class of narcotics, there is probably no drug so much misused as digitalis. And yet it has a rather well defined and understandable field of therapeutic value. It is worth the while of those of us who do not pretend to be authorities on the subject to review the observations, research and conclusions of men who, by long study and painstaking experiment have established, with a fair degree of clearness, the power and scope of this very valuable drug.

In 1785, Wm. Withering of England published his modest little volume "An Account of the Fox Glove and Some of Its Medical Uses with Remarks on Dropsy and Other Diseases." This at once established digitalis as a useful therapeutic agent. Withering's book represented ten years of patient study and observation. It were well if others in the 130 years since had followed his example instead of rushing into print with hasty and careless observations, doubtful surmises, half-baked opinions and insecure conclusions.

Digitalis has been recommended and used for almost everything from flat foot to baldness. It has but one field of real value, the failing heart. All other uses are secondary to this, all other values dependent upon it, all other helpful results due to the good it does the weak heart.

The manner or method of its action is not worked out positively in all details. It is certain that it acts upon the vagus center and less upon its near neighbor, the vomiting center; that it acts upon the heart muscle and perhaps upon the nerves of the heart.

Digitalis does not take the place of defective nerve, or valve, or muscle. It does not add *directly* one iota to the strength of the impaired heart. It does enable the heart to utilize, to the best advantage, the strength it has. For instance: auricular fibrillation is a condition in which the auricle may be said to quiver continuously, or nearly so, instead of contracting periodically. Its muscle fibres twitch convulsively without the co-ordinate contraction necessary to produce efficient auricular systole. The impulse of contraction of many of these irregular and rapid twitchings is transmitted through the auriculo-ventricular muscle bundle of His to the ventricle, producing in that chamber rapid and irregular systoles. Such stormy action quick-

ly wears out the ventricle and circulation fails. In this condition digitalis will not replace one outworn fiber of heart muscle. It will, however, keep the multitudinous contraction impulses of the fibrillating auricle from reaching the ventricle. The auricle may continue fibrillating but it no longer excites ventricular contraction. This state of affairs is called heart block, because the auricular impulses are blocked and do not reach the ventricle. The ventricle then takes up a rhythm of its own, usually slower even than normal contractions. Ventricular systole becomes more forceful and complete because the ventricular energy is put into one strong and complete systole, where before it was dissipated in several hasty, weak, and inefficient contractions. Diastole is, in like manner, made more complete and much longer. The firm systole thoroughly fills the coronary arteries, thus sending nourishment to the heart muscle. The long diastole, or rest period, enables the heart muscle to appropriate that nourishment and grow strong. The better circulation tones up all tissues, including the fibrillating auricles, and they may resume normal contractions, though frequently they do not, but continue to fibrillate to the end of life.

It should be borne in mind that auricular fibrillation is not inconsistent with long life provided the contractile impulses do not set the ventricle going. Indeed, the auricle being chiefly a receptacle for returning blood during ventricular systole, its contraction is, as compared with that of the ventricle, of very minor importance.

All that digitalis does in such a case is to produce coordinate, firm, regular ventricular contractions and insure heart rest. That is, it enables the weak and excited heart to conserve its strength and use it advantageously. Secondary to this is the improvement of heart muscle and general circulation.

Auricular fibrillation is the basic defect in 60 per cent of the weak hearts, as they present themselves at our hospitals, and these figures are approximately correct for private cases. The condition is most certainly diagnosed by the electro-cardiograph. This mechanism is not yet available except in the larger hospitals and well equipped laboratories. Clinically, we base a fairly accurate diagnosis on the weakness and absolute irregularity of the heart. In this condition, more than in any other, digitalis is the most valuable remedy and its good effect often seems almost magical.

Auricular flutter is a related disturbance in which the auricle contracts regularly, with great rapidity even up to four times the normal rate and the ventricle keeps pace, or one-half, or one-third its rate, but always faster

*Read before the Kentucky State Medical Association, Louisville, September 21-23, 1915.

than normal. Digitalis will change this into fibrillation and heart block. Then the ventricle assumes its own rhythm and, after the circulation is thus restored, the drug may be gradually discontinued and the auricle will usually resume normal rhythm.

Next to auricular fibrillation and flutter, the occasion of highest usefulness for digitalis is in acute cardiac dilatation. This occurs whenever the heart is subjected to a too great strain without time for hypertrophy. Thus it may result from a wrestling match, a marathon race, or pumping the blood against the constriction of asthma, emphysema or pneumonia. In the last instance dilation is favored by the toxic degeneration of the myocardium. The effect of digitalis in these cases is most satisfactory.

It is in such cases that it gets unjustly the credit of curing valvular disease. A moment's thought must convince anyone that a broken, shrivelled or perforated valve must always leak, and nothing can restore it. Also a perfectly sound valve will leak if the ring it closes is so stretched that the valve can no longer reach to close it. The murmur and regurgitation of such a relative valve insufficiency disappear when the strengthened myocardium recovers from the strain and resumes its normal place, curing the dilatation. Such are not instances of valvular disease.

Too many of us have been giving digitalis in every case where a heart murmur could be detected. The drug is worse than useless in true valve disease unless compensation is broken. Digitalis in therapeutic doses has no effect on the normal heart. A heart fully compensating for an impaired valve is a normal heart for present purposes of circulation and needs no medicine.

These are the principal conditions that call for digitalis, but it is useful in any case of failing heart except paroxysmal tachycardia, arrhythmia due to disease in the sino-auricular node or purely ventricular arrhythmia, if indeed the least condition really exists.

It will not slow the pulse of fever, probably because the accompanying toxemia benumbs the vagus center. Its action on alcoholic tachycardia is unsatisfactory perhaps for a like reason.

Digitalis is classed as a diuretic, but is such only by means of its effect on circulation. It is therefore not a diuretic in health because in safe doses it has no important effect on the normal heart. It is the diuretic par excellence in oedema of cardiac origin. Nearly all oedema is of cardiac origin, or associated with local or general circulatory defect.

Digitalis is a diuretic just to the extent that it can correct the circulatory defect and unload the water-logged tissues through the kid-

neys. It can not remove the cirrhotic liver impediment to circulation and it can only bring water to the kidneys and, if they are too crippled to filter it out, the oedema remains.

The sole indication for the use of digitalis is the failing heart as evidenced by labored and inefficient heart action, dyspnoea, cyanosis and oedema.

The laboring heart is usually rapid and often irregular. Its state of strain and lack of adequate diastolic rest keeps the diastolic blood pressure high. The weakened myocardium may be unable to push the systolic pressure up to normal. Hence the pulse pressure or difference between systolic and diastolic pressure is lessened. Diastolic pressure is the heart's resting load; systolic pressure its working load. The difference, or pulse pressure, is the working efficiency of the heart. As the diastolic and systolic pressures approach each other, the pulse pressure diminishes; work and rest become so much alike that the heart may be said to have no real rest and the end of that sort of work must soon come. That is the failing heart. It tries to make up for its deficiency of force by increasing its rate.

These evidences of heart failure give us the clue to the criteria by which we may judge digitalis action. The three best evidences of digitalis action in the order of their value are increased diuresis, increased pulse pressure and lowered pulse rate.

There are three conditions in which no increase of urine will occur; viz: when digitalis is not needed because there is no oedema, and when either the heart or kidneys, or both, are so far spent as to be unable to respond to the drug.

Increased pulse pressure is brought about by raising systolic pressure and more particularly by lowering diastolic pressure with lengthened heart rest in diastole.

In noting the effect on pulse rate, it is best to count at the heart, for weak beats may not be palpable in the radial. They are especially deceptive in so-called pulsus alternans, in which condition every second beat only reaches the wrist.

Digitalis has been recommended for nausea and abdominal tenderness, uterine hemorrhage, hemorrhoids and varicose veins. When these conditions are in any degree the result of weak heart and consequent passive congestion, the value of the drug is plain. Swollen and tender liver is a characteristic symptom of cardiac failure. As a vaso-constrictor digitalis acts chiefly on the splanchnics and hence readily helps abdominal and pelvic congestion of cardiac origin.

Arterio-sclerosis and high blood pressure are usually given as contraindications to

digitalis. This condition is not *per se* a reason for giving or withholding the drug. It is essential that the blood be circulated. High pressure is nature's effort to accomplish this end under difficulties. If the condition be chronic hypertrophy results that the end may be served.

So long as compensation exists and the heart is able to pump against its load, there is no call for digitalis. When compensation fails, systolic pressure inevitably falls, circulation is impaired and digitalis is indicated and is safe except in the presence of immediate danger of hemorrhage, as in apoplexy or gastric ulcer.

If in doubt about the safety of the drug in the presence of high pressure, let the patient rest in bed a couple of days. This tends to lower tension and to ease the heart, so that the drug may not be required, or will be safer to give. Indeed, since digitalis acts chiefly by inducing heart rest, it is the natural and sensible inference that the failing heart should be rested by the recumbent position. It is easier to pump blood back and forth on the level than up and down for the sitting or upright posture.

Much of the difficulty of digitalis therapy has arisen because of poor preparations of the drug. Digitalis leaves rightly gathered, properly cured, correctly assayed, and carefully stored, are fairly stable and quite dependable. They deteriorate slowly. On the whole, the powdered leaf is the best preparation, except possibly digipuratum, which is the natural drug with some inert and irritating matter removed. It keeps well and seems a better diuretic and easier on the stomach than the official preparations, but its high price is a serious objection. It is also supplied in solution for hypodermic use.

The tincture and fluid extract are not to be compared with like preparations of other drugs for stability. If fairly fresh they represent the whole drug. The fresh infusion represents all the nastiness and most of the virtues of digitalis but is worthless in two days. Not one of the so-called active principles, even at its best, represents the whole drug. Most of them as found in the shops are worthless. They have only the advantage of fitness for hypodermic use even when right. All active preparations of the drug tend to disturb digestion. The writer can not agree with those distinguished authorities who assert that his disturbance all comes through the vomiting center, some even adding that it proves over-dosing and that digitalis is not a local irritant to the stomach. If their contentions were true, there would be no advantage in giving the drug by the rectum. By giving one-third to one-half more per rectum,

digestion is often spared and full therapeutic effect obtained.

The drug is slow in action and well sustained. Hence three doses daily, preferably after meals, are sufficient. A grain to a grain and a half of the dried leaf, an equal amount of digipuratum, or a corresponding portion of the liquid preparations is the usual dose, but give enough to produce results. The drug disappears from the blood in twelve hours, but evidently remains in the tissues as long as ten days. A patient taking average doses will use 15 to 30 grains before toxic effects are produced. There is no acquired habit, tolerance or immunity to the drug.

As soon as increased diuresis, increased pulse pressure and lowered pulse rate are secured, with accompanying relief of dyspnoea, cyanosis and oedema, the dose should be reduced, so that it may be taken over a long time. For we aim not only at relief of these symptoms but by heart rest and heart nourishment to secure permanent heart strength.

The approach of toxic symptoms may be noted in gastric irritation (hunger, pain, weight and pressure soreness) and in slow pulse. Both these effects are in part overcome by combining the drug with atropine, but this combination is likely to greatly increase blood pressure. Coupled rhythm or bigeminal pulse is the danger signal that should mean instant discontinuance of digitalis.

DISCUSSION.

Fritz C. Askenstedt, Louisville: I agree with almost everything the essayist has said with reference to the use of digitalis. The subject of the action of digitalis is so large that it is difficult to cover it in a single paper. The essayist will bear with me if I should refer to one important contraindication that was omitted in the paper. It seems all our valuable remedies act like a two-edged sword. They may be valuable on the one hand, and yet on the other, they may do great harm when abused. The special contraindication I wish to mention is an impairment of the conductivity of the bundle of His. This bundle carries the contractile impulse from the right auricle to the ventricles, and when its conductivity is impaired by damage to this structure, digitalis or its congeners become exceedingly dangerous, because digitalis or any remedy of that group further impairs the conductivity of the bundle of His and may thus lead to initial heart block, a condition which is very grave indeed. Unfortunately, this impairment of the bundle of His cannot be readily discovered without the electro-cardiograph or polygraph. But the latter instrument can be bought and used by any physician than cares to, and has proven of

great practical usefulness. However, in advanced cases of delayed conductivity, with partial heart block, the impairment can be recognized without this instrument, and should be carefully looked for. For example, when the pulse becomes intermittent, it is important to ascertain whether this intermittency is due to extra-systoles which are not felt at the radial pulse, or whether it is due to omission of the ventricular contraction from auriculo-ventricular block. If you put the stethoscope upon the heart while you take the radial pulse, and you note an omission of ventricular contraction between the two normal beats—that is, during the intermission of the pulse—there is evidently a case of partial heart block. Should you hear a premature, short ventricular sound during the intermission, indicating a pre-systolic contraction, or extra-systole, digitalis may be used.

INTENSIVE TREATMENT OF SYPHILIS.*

By I. N. BLOOM, Louisville.

Some one has said, and with truth, that the treatment of syphilis is an art readily acquired by some and never by others. This is more true to-day, when much of the mystery connected with syphilis has been cleared up, than it was before the dawn of the present century.

The past fifteen years have shown to the world the cause of the disease in concrete form. It has further shown the results of the inoculation of lower animals and enabled us to study the progress of the disease in them and its pathology. It has demonstrated a method by which the blood and spinal fluid may be tested and the presence of syphilitic activities can be shown even where there are no symptoms of the disease. In addition, these years have developed the efficacy of certain arsenical preparations in the treatment. The pathology of syphilis has been materially advanced, and diseases formerly supposed to be only remotely connected with syphilis have been shown to be due directly to the same cause as produced well recognized symptoms.

In spite of these momentous advances we find, too many patients treated in a routine manner without consideration of any or many of the discoveries just noted, which, *en passant*, may be said to have far exceeded those of the four hundred years which preceded their advent.

Almost universally in the treatment of syphilis the arsenical preparations and mercury constitute the sole remedies against the disease but the results are largely determined

by the time and manner in which they are used.

In this article acquired syphilis alone is under discussion.

Of the arsenical preparations which have been in use the discoveries of Ehrlich only will be considered—salvarsan and neosalvarsan. Of the mercurial preparations we shall consider only those which have stood the test of time. Marshall has truly observed—many practitioners have deserted one form of mercury for another before he has learned, by long experience, the true value of what he has discarded.

In the class of syphilitics that come to us for treatment, we find a few whom we see in the very earliest stages of the disease, that is, a day or a week after the first external evidence of infection: more, two and three weeks later and a larger majority from the time of the appearance of the first secondaries to the time when evidences of later and more localized syphilitic symptoms have developed.

The large majority of cases that come to us are those who appear one, two and more years after infection, and who have had either no treatment, insufficient treatment or ineffective treatment and these include the class who have obvious localized syphilis or are without symptoms and yet manifest the existence of a syphilitic taint as shown by the complement fixation tests.

It is necessary, therefore, in the application of treatment of syphilis in general, to see if there are not some general principles upon which to base the treatment. Before we take up the special features of the different classes of cases which come to us to be cured and of these underlying principles, I take it, we must first study the behaviour of the infecting micro-organism after it enters the human system.

What becomes of it during the twenty odd days before it makes itself manifest in a local lesion?

When localized, what is it doing before it reaches the first fortress—the lymphatic glands thrown up to offer their resistance to the hordes of spirochetes entering the system through the blood current? And, again, when through the blood and the lymphatics, they have been distributed to the remotest portions of the body, what measures are possible to effect their destruction or to lessen the damage which results from their presence? Lastly, what can be done to prevent their segregation in special tissues?

The answer to the first interrogative is more or less conjectural. The experiment of Metchnikoff and Roux have demonstrated that for a few hours at any rate after inoculation they can still be destroyed, as for instance

*Read before the Kentucky State Medical Association, Louisville, September 21-23, 1915.

with thirty-three and a third per cent inoculation of a calomel ointment. After that they are beyond our reach in spite of surgical or medical activity. They are met by the phagocytes who are able to resist them feebly and ineffectually and in the struggle help in the development of the local lesion.

When this latter appears, has systemic infection already begun or is there simply a localized assemblage of the spirochetes prepared for further invasion?

Clinically, in the light of the newer remedies there is much ground for the belief that these spirilla are localized and accessible for complete destruction to the newer agencies.

The failure of the complement fixation test to demonstrate their presence in the first few days after the initial lesion manifests itself supports this belief, as well as do the numerous cases reported of reinfection after such early lesions have been treated by salvarsan injection.

After the local lesion has developed there is still a period of varying duration before the neighboring glands become enlarged. During the early part of this stage, the complement fixation test is still negative, showing a probability, at least, that the infection is not general, and clinically this fact has frequently been confirmed.

After the spirochetes have passed through the lymphatics and entered the blood vessels there is an immediate general infection and with it the distribution through the blood and lymphatic channels into the system generally.

At this stage there should be practically one hundred per cent positive blood tests. A description of the phenomena which follow is, of course, unnecessary in this article. Suffice it to say that the tendency of the spirochetes is more and more to distribution and later to segregation. In the stages that follow may be included the various other classes of syphilis which have already been mentioned. And among these classes there is that one in which the spirochetes reach non-vascular portion of the cerebrospinal system where through their toxins or subtle influence on the nerve tissue, parenchymatous or interstitial degenerative changes take place and general paresis and various forms of tabes result.

It is only with a more or less thorough comprehension of the stage of the disease that effective treatment can result.

There is but one object in view on the part of the practitioner. The entire destruction of the spirochetes without damage to their host, whether that destruction is effected at one blow or whether their elimination is made to occur by a continuation of the strongest treatment to more slowly yet surely effect their destruction.

A general principle evolved from this, based on the experience of many observers, not to be doubted, is,

1. That the earlier the disease is recognized and the more intensive the treatment the greater the hope of the entire destruction of the invading host—sterilizatio magna.

2. That the earlier intensive treatment is begun the shorter the time demanded for the treatment.

3. The older the case of syphilis the greater the tendency to the segregation of the spirochetes, the greater their inaccessibility and the more difficult their complete extirpation; and, lastly, a strong possibility based only on clinical evidence, the probability of the older spirochetes possessing a much stronger resisting power. I am not considering the possibilities of different strains of spirochetes, nor, am I considering the variation in resisting power in different individuals to this same strain.

The principles of treatment are dependent upon the recognition of three facts. Syphilis is caused by a distinct micro-organism and its symptoms are the result of its presence or of the poisons generated by it. That there is a period of latency lasting for a short while to a life time during which there may be no clinical evidence of the existence of either the spirochetes or the toxins; and, that the determination of the presence of either requires a complement fixation test. The first two of these principles have been known or suspected for many years, the last must be received as the determining factor in the therapy and duration of the treatment.

The complement fixation tests for both the blood and spinal fluid are the only tests we have of the continued presence of the disease.

In another paper the writer has discussed the clinical value of positive Wassermann in certain phases of syphilis. This test must be used under proper regulation again and again for many years to determine the efficacy of the treatment. It is well known that after certain therapeutic measures have been used the serological test will show a negative for a varying period, after which a positive may reappear. The reappearance of a positive has been generally taken that further treatment is necessary, the general end in view being the attainment of a permanent negative, that is, a negative which remains after tests have been made at varying periods of months and years. This, then, should be the object of treatment, and the duration of the treatment is purely secondary to this.

In early primary syphilis one or two salvarsan injections alone have sufficed to produce a serological negative which has endured for four or five years without further treat-

ment in such cases has been offered in individuals who have been reinfected months or years after such treatment has been given.

In early secondary syphilis, too, cases are not rare in which the treatment, which will be referred to later, has in a year or eighteen months produced what seems to be a permanent negative. On the other hand in the later forms of syphilis it has often been impossible for any therapeutic remedies that we have at our command to produce a negative which shall endure.

It must not be forgotten that often a serological blood test will show a negative where the spinal fluid will prove positive. It is, therefore, necessary to make a spinal fluid test several times before pronouncing a patient cured, if we can ever so pronounce him with certainty. It may be said in general, in this connection, that a serological positive will be obtained in from ninety to ninety-five per cent. of all cases of syphilitic infection from the time it first shows late in the primary stage throughout the whole course of the disease, hence its very great aid in determining the condition of the patient. It is the writers custom, wherever possible, to allow at least three months of freedom from mercurial and arsenical medication to elapse before the complement fixation test is made.

Taking up the treatment of primary syphilis, and bearing in mind what has been said about the location of the spirochetes before they have entered into the blood current, the best hope for the abortion of syphilis and the complete sterilization of the individual is based on the use of salvarsan at the very earliest period after the disease has been recognized; hence, the importance of examining the local lesions for the detection of the spirochetes and the strong disapprobation of the application to the local lesions, at its first appearance, of those antiseptic dressings which may delay or prevent their detection. Such lesions when they appear should be examined at once, but where that is not possible should be dressed with the simplest possible dressings, as for instance, a borie acid ointment—three per cent. or even a cold cream ointment or a simple dusting powder. Serologically, there must of necessity be a large percentage of failures in the proper diagnosis in the early primary stage. The writer within a month has seen a patient who presented three small groups of, what appeared to be ruptured herpetic vesicles. This patient was forced to leave on a business trip for ten days, during which time he had used a simple dusting powder. On his return these lesions had developed an indurated suspicious appearance which called for the Wassermann test. This was made on the seventeenth day after the appear-

ance of the lesions and made by a competent man. The test showed negative. The microscopical examination showed no spirochetes. Induration increased and on the twenty-fourth day a second Wassermann was taken which proved to be strongly positive.

When statistics are gathered it will be shown that the earlier the disease is recognized and the treatment begun the larger the percentage of successful sterilization.

The writer gives a full dose of salvarsan as soon as he has made the diagnosis in early primary syphilis, of course, having previously examined as to the condition of the heart and kidneys. Of late he has paid less attention to the eyes, because he is less timorous as to the effect of the arseno-benzol upon them; in two cases he has given salvarsan in spite of glycosuria.

A week later he follows it up with a second, and immediately on the full recovery proceeds with mercurial medication.

Usually, on the third or fourth day after the second salvarsan, he begins his intramuscular injections of insoluble mercury, preferring the salicylate to other preparations. These he gives, one in every five or seven days and usually continues them until twelve have been given, increasing slowly the dosage to the limit of tolerance. When these have been given, where possible, after a week or two weeks interval, he gives inunctions rigidly enforced for thirty days. Where these, for many reasons cannot be given, he is reluctantly compelled to give mercury per orem pushing this also to the limit for a month. At the end of that time he usually persuades his patient to endure another course of twelve intramuscular salicylate of mercury injections followed in turn by either the inunctions of thirty days, or the mercury by the mouth for same length of time. Then an interval of three months and a Wassermann. If it is negative he explains conditions to his patient and gives him the choice of continuance of treatment, which he advises, or a further cessation of all treatment until three months more have elapsed when another Wassermann is taken. There are few patients of intelligence who desire to discontinue medication after the first negative Wassermann and there should be few doctors who are willing to deprive their patient of the benefit of intensive medication on the strength of a single negative.

Where any degree of positive has been obtained in this first serological test after medication has been begun, a third and fourth salvarsan are given and the mercurial course outlined above is repeated.

In primary syphilis it is rare that this second Wassermann is other than negative.

Should both prove to be negative the patient can well risk three months without medication in the hopes of a continuance of a negative test. If the negative finding is repeated the patient should be advised to report every six months for a Wassermann test and the treatment discontinued as long as the Wassermann remains negative. At the same time that the first Wassermann is taken after the first period of treatment it is well to have an examination of the spinal fluid, and another examination of the spinal fluid should be made before the patient is finally told to discontinue medication and report semi-annually.

With the distribution of the spirochetes throughout the system in the secondary period, the same treatment as above indicated should follow, except there is no occasion to attempt to satisfy an academic curiosity as to the serology of the patient before, at least, a year and a half of treatment has been given. Here, too, the number of salvarsans, intravenously administered (the only way the writer administers salvarsan) should be increased at the beginning of the disease to three, four or even five according to his judgment of the severity of the attack, the resistance which the patient offers and the age of the syphilis at the time at which his services were first solicited.

It should not be forgotten that the cost of the treatment of syphilis has increased materially since the 20th century discoveries and unnecessary complement fixation tests increase the burden. The time may come soon when only the very rich and the very poor, in well conducted hospitals, can hope to receive the proper treatment for syphilis.

After the first Wassermann, after a year and a half, the physician may judge from it whether two, three or four more salvarsans are advisable, or whether it is best to continue the intensive use of mercury in the manner indicated. If the latter, the main dependence should be upon either the intramuscular insoluble injections or inunctions or an alternation of the two. Where the patient can be induced to use these two methods a more profound effect in the complete destruction of the spirochetes, if any remain, is obtained.

Mercury by the mouth should never be given unless in the course of the treatment circumstances compel the physician to do so. This happens, however, only too often, especially with women. The pain, varying with individuals, which accompanies the intramuscular injections wears the patient out after a time and he refuses to continue. Scarcely and other reasons forbid, in many cases, the use of the inunctions. It is necessary to temporize for varying periods by employing the oral method of mercurial medication. The influ-

ence of the physician on the patient will count for much in diminishing the length of the periods during which the patient is under such medication.

At the end of two years a second serological test should be followed by a more or less intensive mercurial administration, using the iodides twice in the third year for periods of six weeks each, preceded by six weeks of rest from all treatment for the purpose of obtaining a Wassermann reaction. Should the reaction at the end of the second year be stronger than a weekly positive rest and the iodides should be given only once in the third year and that towards its close.

If, after three years of such medication, a decidedly negative reaction is obtained then for the first time the expectant treatment may be employed for a period of three months and another blood test should be made. Should a similar decidedly negative occur, six months more may be employed in watchful waiting before another test is made; and, with a perfectly satisfactory test the physician should establish semi-annual serological examinations. Of course, it is assumed that at least two spinal punctures have been made at proper intervals during this time to determine the condition of the cerebro-spinal system.

When the patients come in the so-called tertiary period it is difficult, often impossible, to obtain a permanent Wassermann negative; however intensive the treatment with both salvarsan and mercury, the tendency to a return to positive is exceedingly great. Whether this is caused by the segregation of the spirochetes, at present unknown to us, or whether they grew more resistant to the remedies employed are matters which the future may or may not determine.

The fact remains that tertiary syphilis is by far the hardest to cure definitely, as far as we are able to use the word cure in its general application to syphilis, and recurrences are common both clinically and serologically. It is, therefore, necessary to use our strongest efforts against this phase of the disease and here a saturation of salvarsan is advisable, whether this saturation is produced by numerous full sized doses at long intervals—say two, three or four weeks, or by small sized more frequently repeated intravenous injections with the constant addition of insoluble mercurial injections and inunctions vigorously prosecuted.

For two or three years there should be few if any periods of rest from medication for the purpose of serological tests. Time is too valuable to waste on a possible negative, which in months again become so positive.

In the vigorous pounding away in an attempt to destroy the spirochetes we must base

our hope of ultimate victory. Whether we shall always be able to accomplish this, it is too soon to determine. Only five years have passed since the introduction of salvarsan, but in the light of the present day it seems the only way to hope for its accomplishment.

For the last year the writer has been using the old salvarsan in preference to the new. It is not necessary for him at this time to give the reasons for his conviction that its sterilizing effect is much greater than that of neosalvarsan. In the intravenous injection that preceded the intraspinal injection of salvarsanized serum, with one single exception, in every case he has used the old salvarsan and in all that has preceded concerning the use of salvarsan the old salvarsan is indicated.

The writer wishes also to express his profound disappointment that has followed the use of salvarsanized serum by intraspinal injection for the relief of cerebro-spinal syphilis. In seven cases of paresis he has failed to find any beneficial effect although in every one he succeeded in changing a positive Wassermann to a negative and in materially reducing the cell count and bringing the globulins to normal. In one of these cases, treatment was begun in the very incipency of the clinical evidences of the parietic attack and although the serological tests after six cerebro-spinal injections were classical, the clinical symptoms soon developed to a climax that sent the patient to the asylum. Its effect has been so little encouraging in a much larger number of cases of tabes and tabo-paresis that the writer has discarded the method and is at present attempting better results from a different procedure.

DISCUSSION.

Arthur T. McCormack, Bowling Green: I think this paper is really one of the most important that has been presented before the Kentucky State Medical Association at this meeting. I am constantly meeting with doctors of the State who are still treating syphilis with a few protoiodid pills of small caliber, given at infrequent intervals. These pills are frequently as hard as shot and as worthless as water in the treatment of syphilis. I really believe that in view of the modern knowledge of syphilis, it would be better for the people of Kentucky and the profession at large, if protoiodid pills should be forgotten or not manufactured. I believe in their administration in this State they are doing vastly more harm than good, and should be discarded from the armamentarium of every practicing physician. If he does not know how to treat syphilis in any other way, he should not treat it at all. I am satisfied from personal experience in a considerable consultation practice in which I have seen the complications of mistreated syphilis so

frequently, that the spirochetes acquire immunity to all drugs which affect them when given for long periods in small doses, and we have patients coming to us with the complications of syphilis when the spirochetes were thoroughly fortified against mercury and arsenic and all other medication on account of one or all of them having been given in infinitesimal doses over long periods of time, and anything we may do will not have the effect probably of killing the spirochetes in those particular patients. In the same way, we see ease after ease right along from our observation and examination of patients with malaria that have acquired immunity, that is, the plasmodium has acquired immunity by the administration of tonic as distinguished from anti-malarial doses of quinin for a long period of time. In treating syphilis we should aim to kill the spirochetes. In treating malaria we aim to kill the malarial plasmodium, and so we administer a drug or drugs for the distinct purpose of killing just as much of the vermin as we can at the beginning before the disease gets a strong foothold. Getting rid of spirochetes is like getting rid of Johnson grass on a farm or itch bugs on a child. Mild treatment disguises and cultivates the trouble. Curative treatment in syphilis is always radical.

I wish to thank Dr. Bloom for his paper, and only wish every doctor in Kentucky could have heard it. Such a paper should have a far-reaching influence, and every practitioner who cannot treat these cases by modern methods, should send them to others who can.

Curran Pope, Louisville: This is a subject we read so much, and everyone of us is brought closely in daily contact with the disease under discussion. I am like Dr. McCormack, when I say that Dr. Bloom should not only be congratulated on his paper, but it is a paper that sums up in a satisfactory way the treatment of syphilis today, as I view it.

Is syphilis curable? I do not know whether it is or not, and I do not believe it is at present. However, it is one of the most terrible of diseases, and with our present methods of treatment, such as Dr. Bloom has suggested, we may express reasonable hope that in the future it may be cured. Under that head, I suggest to a patient oftentimes, that even though he has a negative Wassermann, he should take a course of treatment once a year. Sometimes this acts as a provocative, and at the end of treatment we will get a Wassermann. I treat no cases of this disease in the acute stage and in dealing with the direct stage I think there should be excision of the chancre, wherever it is possible, or the chancre should be cauterized with electric cautery, which is a valuable addition to our treatment, and if Dr. Bloom mentioned this I failed to hear it.

I do not think salvarsan cures syphilis despite

some of the statements of some of the best syphilographers, like Heidenfeld. I do not believe mercury cures it and I agree with Dr. Bloom that the administration of mercury by the mouth is simply a tinkering farce and more dangerous than it is possible to conceive of unless one is fully possessed of the knowledge of what syphilis really is.

Personally, I have not the faith in a negative Wassermann that Dr. Bloom's paper would convey to my mind. I do not believe Dr. Bloom himself wants to put the faith in a negative Wassermann that he would in a positive one. And furthermore, I want to say once again, as I have said on several occasions before, my experience with intraspinal treatment has been a duplicate of Dr. Bloom's, and the only case that I ever thought would likely upset my idea that good could be derived in one in which the last glimmering hope had disappeared.

In paresis I have gotten much better results from the administration of small doses of tuberculin and the nucleonate of soda, producing a marked hyperleucocytosis, than I have gotten with the intraspinal or any other method of that character in the treatment of cerebrospinal nervous syphilis.

I. N. Bloom, (Closing): I wish to thank Dr. McCormack and Dr. Pope for their kindly words in discussing my paper. As to whether syphilis is curable or not, I tried to emphasize in my paper the points that the curability of syphilis varies with the time at which it is actively treated. I believe primary syphilis is sometimes cured in two or three months, and more frequently in from six to ten months. This has been demonstrated in patients who have had a continuous negative Wassermann and in some, who have been re-infected. The earlier cases of syphilis are treated the greater the per cent of curability. I have also emphasized the fact that it is doubtful whether the later stages of the disease patients who come to us with insufficient and inefficient treatment, can ever get a permanent negative Wassermann. Where syphilis exists in the so-called tertiary stage, it is questionable whether we can ever completely cure it. The only proof of a cure we have in the absence of symptoms is a negative Wassermann. Like Dr. Pope, I do not lay much stress upon a single negative Wassermann, but I do lay considerable emphasis upon repeated negative Wassermans extending over a period of years. As far as it is possible by modern methods to tell when a patient is cured of syphilis, we can depend upon two conditions one of which is the absence of the clinical symptoms, and second, repeated Wassermann negatives extending over years. When these two conditions co-exist the syphilis may be said to be cured.

Curran Pope, Louisville: Don't you think you should have a continuous negative Wassermann after provocative treatment?

I. N. Bloom: I am willing to accept that. As far as spinal injections of salvarsanized serum are concerned, I have taken no part in the discussions, because I wanted a sufficient time to elapse before passing judgment. I have done a large number of them, and in reading about the results of those who are doing this continually, I must say that I do so with considerable envy. In fact there is no question but what symptomatically it is of great benefit at times. I have in mind a patient with a tabetic stomach, with constant vomiting, occurring repeatedly day after day, and then ceasing entirely after a series of intraspinal injections and he has since remained all right. These symptoms have been absent since January. I have seen improvement in some of the symptoms, but I have not seen such general improvement as to justify the belief in a cure or a cessation of the syphilitic process.

J. W. Kincaid, Catlettsburg: I understood you to make the statement that you were convinced in a few instances that syphilis was cured by the fact of reinfection. You also made the statement that the actual canterly sometimes would bring about a cure. Do you mean to say that the use of the actual canterly alone is going to do that, or does it accomplish it by killing the spirochetes at the point of infection; that it limits multiplication in the system, and the response is much quicker to appropriate treatment, or the follow-up treatment, so that you eliminate the disease? Is that statement made unqualifiedly in regard to the use of the cautery?

I. N. Bloom: I omitted entirely from my paper any reference to excision of the chancre, and it was referred to by Dr. Pope. Dr. Pope has left the room, and I want to say for him, although I have had no conversation with him, that he did not mean it was curative, but it had the effect of diminishing the number of spirochetes at the focus of infection, thus diminishing the intensity of the disease. I did not say anything about cauterizing or excising the chancre. This is a French method that is universally employed. The most advanced French syphilographers excise the chancre and follow the excision with arsenical preparations. The end in view in excising the chancre is not with the hope of stopping the disease or curing it, but to diminish the number of microorganisms which multiply in the system. Personally, I do not believe it has any effect at all. I did not emphasize my opinion because it is not based on many practical experience, as I never cauterize or excise the chancre. I do not think anyone expects by early excision or cauterization of the chancre to stop the disease. In fact, Metchnikoff and Roux have proven to the contrary in the famous experiment on a medical student who permitted himself to be inoculated with syphilitic virus, with a control experiment being made at the same time on anthropoid apes. These apes developed syphilis, and the medical

student in whose case thirty-three and a third per cent. calomel ointment was used, remained free from the disease. It was shown further in the experimental inoculations that twenty-four hours was too late to develop the disease in the anthropoid ape, that is, where the site of the inoculation was again rubbed with calomel ointment or cut out.

HEART COMPLICATIONS IN ACUTE INFECTIOUS DISEASES.*

By A. L. THOMPSON, Madisonville.

Valvular lesions of the heart were recognized as long ago as 1715, when Vieussens described lesions of the valves occurring in the form of warty or cauliflower excreescences or vegetations, which prevented the closure of the valves. In 1869 Winge, Heiberg and Virchow demonstrated microscopically the presence of minute granules in the vegetations, showing that these lesions were due to the action of bacteria, and in 1883 Weichselbaum cultivated staphylococci and streptococci from endocardial vegetations, and later other investigators succeeded in producing these same lesions in animals by injecting bacteria in the blood. It soon became apparent that a close relationship existed between rheumatism and valvular lesions, and this disease still stands out boldly as the chief etiological factor in the production of valvular disease; but it is now a well established fact that the heart is the chief target in all acute infectious diseases, and a thorough dissemination of this knowledge among the profession should be productive of a vast amount of good in the way of preventing heart complications. A visit to any large hospital or clinic, or a perusal of the literature will convince anyone of the necessity of adoption of more radical measures for the prevention of these complications, the value of which cannot be overestimated. Too many young men and women are being made invalids and too many useful and valuable men stricken down in the prime of life, with their work unfinished, as the result of cardiac disease.

We have good reasons for believing that all acute infectious diseases are micro-organismal if not bacterial in origin, and that they are blood-borne diseases—that is the specific bacteria gain entrance to the circulation, passing onward until suitable soil for their growth and development is reached and there begin their mischief. In the very beginning of typhoid fever, for instance, before it can be diagnosed by clinical manifestations or a positive Widal reaction, typhoid bacilli can be

isolated from the blood by means of a blood culture. These same bacteria are also sometimes found in post-typhoidal ulcers. Often a general infection follows a local one and a bacteremia will be found. In puerperal sepsis the infection is said to be carried into the uterine cavity by the hand of the obstetrician, which I do not pretend to deny, but blood cultures will usually reveal a streptococemia, the outcome of which is too well known to all. In local abscesses and other skin lesions a bacteremia may often be found. Recently I saw a case of generalized eczema during the course of which an unaccountable elevation of temperature developed. No cause whatever could be found for the elevation of temperature until after making a blood culture, I found a very luxuriant growth of staphylococci. We usually look upon acute abscesses or boils as purely a local condition, but it seems to me that it might not be too venturesome to at least suspect that perhaps the bacteria gain entrance into the circulation through some very minute abrasion, and, on the failure of the organism to produce a sufficient amount of antibodies, the bacteria are swept along through the blood and into the capillaries, lodging at the point or points having the greatest affinity for them. This, to my mind, is fully as plausible as the manner in which the hookworm ova get into the small intestines. Be that as it may, we do know that in many, if not all acute infectious diseases, at some stage of the disease, the bacteria causing the disease circulate freely in the blood. Moreover we know that in local conditions such as a small focus in a tonsil, an alveolar abscess, an infected prostate, a chronically diseased gall bladder or appendix, etc., bacteria are absorbed in the general circulation and frequently cause heart lesions as well as other troubles far remote from the focus. In diseases where the bacteria seem to remain stationary, as diphtheritic infection, the toxins produced by them circulate freely in the blood, and produce structural changes in the cardiac mechanism.

All these poisonous substances must of necessity pass through the heart. This being true, it is no wonder that the heart suffers to a greater or less degree in every systemic infection. R. N. Wilson ventures the assertion that there probably occurs no instance of perfect cardiac recovery from an acute micro-organismal invasion. He does not mean to say that there are no clinical recoveries, (there is a marked difference in a clinical recovery and a perfect cardiac recovery,) but a scar results from every attack on the cardiac musculature and on the endocardium and pericardium, which leaves a weakened condition of the cardiac mechanism. This assert-

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ion is borne out not only by clinical observation, but by the microscope at necropsies, where acute cardiac lesions are usually found to be superimposed on old ones. As a general rule we expect a clinical recovery in most cases of acute endocarditis of the first attack, except the malignant type, but often a second attack is fatal, especially in children.

Wilson groups the effects of the active agents of all the acute diseases into those of (1) acute true myocarditis, (2) myocardial atony due to degenerative change, (3) toxic paralysis or paresis of the cardiac muscle and nerve fibre, (4) endocarditis (valvular and mural), (5) simple and mediastinopericarditis, and (6) muscular and valvular insufficiencies with dilation of the cardiac chambers. Until rather recently practically all attention was centered on endocarditis with its subsequent valvular changes and cardiac decompensation, but Wilson has shown by careful microscopic study that in all acute infections which are general and of much severity, the cardiac musculature invariably suffers, and the extent and type of inflammatory involvement varies from the simplest edematous infiltration or localized round cell infiltration to the characteristic nodules of Aschoff, found in the hearts of subjects suffering from rheumatism and chorea. Moreover evidences in the myocardium of attacks antedating that which proves fatal, such as areas of old fibrous tissue, side by side with new inflammatory processes, or such as the scars and fibrous patches representing healed Aschoff's bodies, accompanying newly formed and typical giant-cell colonies were found. Diphtheria, influenza, pneumonia, typhoid fever, tuberculosis and syphilis show a marked predilection for the myocardium but, as has been shown, any acute infectious disease is capable of producing structural changes in the myocardium which lead to some degree of disability and incompetence, mainly as the result of depreciation in muscular tone. Every step toward degeneration of the myocardium incapacitates the heart to a greater or less degree as the result of loss in muscular tone, and this same loss of tone frequently extends into the muscular wall of the arteries.

As an etiological factor in the production of endocarditis, rheumatism has ranked first since it was discovered that it was often responsible for such lesions. To my mind rheumatism is an ambiguous term. It has served, as a cloak to cover the ignorance of physicians for a long time and has been held responsible for all aches and pains from the mildest muscle pain to the most agonizing pain of acute osteomyelitis. It is now all but settled that the condition which has for so long borne the title of rheumatism is an acute arthritis due

to infection by some type of streptococcus, usually, perhaps the streptococcus viridans which type has a marked predilection for the endocardium. It is also an established fact that most cases of acute tonsillitis are due to an invasion of the streptococcus, hence we have learned to link these three diseases together. Often in taking the history in cases of cardiac decompensation one will ascertain that sometime previously the patient had tonsillitis, followed later by arthritis and finally by shortness of breath and edema of ankles and legs, etc. But this question presents itself: Does the arthritis always precede the heart lesion, or do they occur conjointly, or might not the heart lesion precede the arthritis? The latter seems plausible to me, inasmuch as the bacteria must pass through the heart cavities before reaching the joints. Syphilis is considered by many to rank second in causing endocarditis, but Brooks and Carroll have pointed out that the most frequent and important heart lesion of syphilis is one of the heart muscle, which is dependent on a periarteritis of the coronary vessels. But the point to keep in mind is that any acute infectious disease is capable of producing endocarditis, the result of which might be a persistent inflammatory change in which fibrosis is the ultimate outcome; or vegetative deposits and growths appear; or the vegetative and ulcerative processes of malignant endocarditis, with consumption of the tissues, manifest themselves.

Pericarditis is said to be most frequently produced by pneumonia and rheumatism, but it is a well known fact that pneumonia is not always caused by the pneumococcus, and all types of arthritis are usually looked upon by the majority of the profession as being rheumatism. With respect to the cause of pericarditis, therefore, the same may be said as has been said for myocarditis and endocarditis, since it has the same general blood supply as the myocardium and the valves. Any bloodborne infection can produce pericarditis.

Muscular and valvular insufficiencies with dilatation are the ultimate outcome of the lesions already enumerated. A diseased heart muscle can no more be expected to withstand the hardships incident to emergencies than can a diseased muscle in any other portion of the body. Neither can a valve which has been warped and noduled out of shape be expected to perform the function of a perfect valve.

The prognosis in heart complications is dependent upon the etiological factor, the co-operation of patient and family with the physician in the management of the case, and whether it be the first attack or a recurrence. Ordinarily we may reasonably expect a clin-

ical recovery in the first attack, but, as has been pointed out, a complete cardiac recovery is doubtful.

TREATMENT.

Treatment of acute cardiac complications resolves itself into absolute rest in bed, with an abundance of pure, fresh air, a very bland, easily digested diet, taken in small amounts and in the prone position, and a minimum of meddlesome medication. It is my belief that laxatives and opiates are the only drugs indicated in the majority of these cases. No one would think of advising exercise for an acutely inflamed muscle, or irritation to an acutely inflamed mucous surface, but on the other hand we would advise rest and freedom from irritation. In the treatment of acute cardiac complications we should be just as reasonable and use the same degree of judgment as we would with any other acutely inflamed organ. Perhaps the most trying time on both patient and physician will be during convalescence. In private practice it is almost impossible to keep these patients at rest for as long a period as is necessary. After the patient has sufficiently recovered, if there are any foci of infection they should be removed to prevent a recurrence.

A REVIEW OF CONDITIONS RESULTING FROM CARDIO-VASCULAR DISTURBANCES WITH OR WITHOUT ORGANIC CHANGES OF THE HEART AND VESSELS.*

By W. F. BOGGESE, Louisville.

When our distinguished President asked me to present a paper before you, assigning to me the title, Cardio-Vascular Diseases, I at once replied that while I would be delighted to read a paper at this meeting I had neither time nor inclination to write a text book of several hundred pages, and then only touch upon the borderlands, such was the breadth, height, and depth of the subject assigned me. Upon consideration they have permitted me to skim over and discuss some of the elementary phases and thoughts of this ever-important and ever-increasing factor of human life, the pathology and pathogenesis of which does more to abbreviate human existence than does all other factors. So after some little deliberation I am inclined to present in a purely clinical way those every-day phases of cardiovascular disturbances and their symptomology and handling. Apart from the organic disease of the heart, such as endo-carditis, myocarditis, aortitis, etc., the conditions that I shall present are oftentimes a fore-

runner of organic disease as well, and are the cause of many of the disturbances and discomforts for which the patient consults us.

Let me summarize the question of blood pressure. By blood pressure or arterial tension we mean the pressure that the blood is exerting on the walls of the blood vessels, either normally or abnormally. This arterial tension is caused by the force of the heart behind, and the elasticity or inelasticity of the blood vessel in front.

Factors influencing blood pressure and blood velocity. Theoretically we may have the pressure and also the velocity influenced by four factors:

The rate and force of the ventricular contraction.

The elasticity of the blood vessels.

The peripheral resistance.

Total amount of blood to be moved in the circulation.

The profession must remember the wide variations of blood pressure in different individuals under strictly physiological conditions, taking into consideration the general muscular development of the individual, his method and mode of living, and his occupation. And it requires some little thought to determine whether hyper-tension or hypotension within certain limits is normal or abnormal.

Some of the diseased conditions in which we find pathological high blood pressure are, first, the toxemias of kidney origin, with or without demonstrable organic lesions; the various forms of nephritis, especially in the chronic forms, both parenchymatous and interstitial. Whenever you have signs of renal insufficiency in the metabolism you are going to find high blood pressure, and the rise of pressure runs parallel to the severity of the disease until the terminal fall sets in from cardiac weakness. Again we find hypertension associated with arterio-sclerosis, even in the earliest stages, for the very causes of arterial hardening is the factor of high pressure as well. In this disease the mechanical factors effecting blood pressure approach those in a system of rigid tubes,—high blood pressure throughout systole and low pressure in diastole. We also find it in hypertrophy of the heart, such as we find in the athletes; as the result of smoking to excess; in the various compensated heart lesions, as well as aortic insufficiency, whether or not associated with arterial sclerosis. We also find hypertension associated with practically all forms of intercranial pressure, when this is raised above the normal blood pressure, such as meningitis, intercranial hemorrhage, brain tumors, Jacksonian epilepsy, etc. Here the rise of blood pressure expresses the need of the brain for

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blood. In this particular type of cases let me mention here that the only medical treatment is the administration of atropine. Then we have the blood pressure suddenly rise to a pathological degree in many of the so-called forms of vascular crises, either associated with various organic diseases or unassociated with organic lesions, as result of purely nervous vaso-constriction. Tabetic crises, angina pectoris, intermittent claudication, Reynaud's disease, and possibly exophthalmic goiter, idiopathic epilepsy, etc. A quotation here from Hirschfelder would be appropriate: "Probably no unit cause exists for the crises themselves; the visceral crises and lancinating pain in tabes, the painter's colic, the uraemic convulsion, the delirium of the cerebral sclerotic, the pain of angina pectoris, and the attack of cardiac asthma seem to have little etiology in common except their relation to the sympathetic nerves. However, all manifest high blood-pressure, and according to Pal, all are relieved by artificial depression of blood pressure. It is therefore, not unlikely that however diverse the ultimate causes of the condition, the cause of the symptoms is high blood pressure with localized vasoconstriction." Then, too, in certain diseases in which the viscosity of the blood is markedly increased you will have increased blood-pressure. In the case of cyanosis in heart failure with organic compensation we have a condition of high blood pressure which is of great clinical importance, since the high blood pressure by increasing the work of the heart accelerates its failure.

Now just a few words as to the pathological conditions associated with the opposite condition, that of hypotension, or low blood pressure, and while I believe that the occurrence of low blood pressure is most commonly in the minds of the profession associated with the idea of diseased heart, I want to call your attention to this as a fallacy, and that a low blood pressure is more commonly an index of a failure of the vasomotor center than of the heart itself, and occurs in conditions where the strength of the heart itself is uninjured. Such conditions as acute infectious diseases, such as typhoid fever, peritonitis, perforation, pneumonia, diphtheria, scarlet fever, etc., and in certain cases of phthisis, and more particularly shock, either physical or mental; in collapse after extensive hemorrhage, in your diarrhoea, dysentery, cholera, excessive vomiting, and in all of those conditions when large amounts of fluids leave the body, a very low blood pressure results. These are few of the conditions in which, as a rule, we find hypotension.

The lowering of blood pressure in shock is explained according to Henderson in the following sequence of events:

(1) Pain or emotion; (2) hyperapnoea; (3) overaeration of the blood (lowering of the CO_2 content, acapnia), dilatation of the veins and accumulation of blood in the latter, lowering of the venous pressure (and hence diminished entry of blood into the heart) (4) fall in arterial pressure, accompanied by loss of arterial tone (vasodilatation); (5) cerebral anemia.

Next let us consider in a few words the analysis of the alterations in the cardiac rhythm. This is a clinical picture of no little importance and one that produces such discomfort as to drive patients to their family physician. It is also a matter of interest for the physician to determine the reason and causes for these arrhythmias, whether they are of extra-cardiac or intra-cardiac origin. The classification of Hirschfelder is possibly the most accepted one: viz.:

A. Of extracardiac origin.

1. Neurogenic, due to more or less rhythmic reflex stimuli passing through the vagi and accelerators (toxic, reflex from various organs, respiratory reflexes from lungs).

(a) Associated with the phases of respiration. Many of our arrhythmias may be more or less dependent upon the respiration with an inspiratory slowing or expiratory quickening of pulse, the intermission of heart beats, if they occur, are due to extra systoles.

(b) Not associated with respiration—Maekenzie's youthful type.

2. Due to disturbances in the filling and emptying of the heart from traction upon the heart and great vessels—dropping of beats without heart-block, pulsus paradoxus and Riegel's pulse.

B. Of intracardiac origin.

1. Due to disturbance in the conduction of normal impulses—dropping of beats.

1. Auriculo (atrio) ventricular block.

2. Sino-auricular block.

3. Interventricular (?) block (hemisystole).

2. Disturbance of contractility—pulsus alternans, and failure to open aortic valves.

3. Occurrence of beats in response to abnormal stimuli or increased irritability.

1. Extrasystoles, in which irregular beat is brought on by a

- single abnormal stimulus.
 - (a) Ventricular.
 - (b) Auricular.
 - (c) Auricular- (atrio-) ventricular.
- 2. Permanently irregular heart.
- 3. Paroxysmal tachycardia (auricular fibrillation).

Characteristics of reflex all arrhythmias. The striking feature of these neurogenic disturbances of rhythm is that they are often characterized by instability of rhythm, by the occurrence of rhythmic changes in rate rather than by the interpolation of beats which differ from the others in character. The beats usually occur in short groups, the first beat of the slower group being the longest, the rate of the more rapid series showing a progressive increase. The last beat of the rapid series, with the vagal pause following it, may be mistaken for an extra-systole; but, on examining the few beats preceeding it will be seen that this beat was not premature and not due to an abnormal stimulus. Moreover, the beats are usually of full and almost equal strength thereby differing from the feeble beats of extrasystoles; and they do not occur, as do the latter, abnormally early in the cardiac cycle. It is an irregularity in rhythm rather than an irregularity in force, though a certain degree of the latter may be present through the action of the vagus of the heart.

The rhythm usually becomes regular within half an hour after the hypodermic administration of atropine, .0005 to .001 Gm. (1-120 to 1-60 gr.). This rule is not invariable.

In this class of disturbances we might also place the failure to conduct impulses generated normally, the so-called heart-block, of which there are several types. (1) Auriculo-ventricular heart-block, which may be either (a) Functional, from overstimulation, of the vagus, such as we see in digitalis poisoning, or after severe fevers such as pneumonia, and influenza, (b) organic, from interruption of the bundle of His. (c) A combination of these two effects.

(2). Sino-auricular block.

The mechanical effect of any arrhythmia is to slow the circulation, as may be easily seen from the volume curve of the heart during a period of irregularity. This slowing in itself tends to bring on cyanosis, increase the CO_2 content in the blood, and as Cameron has shown, to diminish the tone of the heart muscle in this way. On the other hand, the long pauses cause an increase of pressure in the veins, and the influx of venous blood under a relatively increased pressure acting upon cardiac muscle, whose tone is diminished, tends to over-distend the heart. The over-distention, by increasing the diameter of the

ventricular chamber, increases the hydrostatic pressure upon its walls and causes it to work at a disadvantage.

The symptoms for which a patient suffering from these and other cardio-vascular diseases presents himself to the physician, are very variable and frequently so indefinite and so far removed from the sight of the disease as to mask their real origin, and very often causes mistakes in diagnosis. The symptoms that will attract the patient's attention may be either respiratory, sensory, digestive or psychic, and notwithstanding the fact that the estimation of blood pressure and the determination of pulse pressure give us most valuable information which can not be otherwise obtained in regard to the circulation, yet a single determination of blood pressure under ordinary clinical or office practice may be of little or no value. A series of determinations under varied conditions are necessary to eliminate a certain psychical factor, and we must remember that in many people both young and middle aged there are certain periods of high blood pressure which are only temporary in character, disappearing in a few days, sometimes in a single day, with no other treatment than a brisk purgation and restriction of diet. These are conditions of high blood pressure due to intestinal putrefaction and auto-intoxication independent of any organic lesions, either of the heart or of the kidney.

The main symptoms of cardio-vascular disturbances referable to the respiratory tract causing patients to consult the doctor are dyspnoea, with cough, oftentimes cardiac asthma, pulmonary edema sometimes cyanosis. This dyspnoea of cardiac origin is strikingly shown in the fact that it is increased in the reclining position, and is oftentimes particularly marked during sleep, a fact which is explained on the idea that the diminished sensitiveness of the respiratory centers allow CO_2 to accumulate with greater ease than during periods of wakefulness, and that owing to the relaxation of the laryngeal muscles the air enters the lungs with more difficulty, and this accumulation of CO_2 during the night and during sleep is a factor in our conditions of cardiac asthma.

Among the sensory symptoms about the heart you could include the one commonly known as palpitation. Normally one is not conscious of his heart beat, but under the stimulation of the general nervous sensibility by certain toxic substances as coffee, tobacco, hyperthyroidism, as well as in neurasthenia and hysterical conditions or in any of the arrhythmic states that we have mentioned, the conscious sense caused by each beat of the heart is known as palpitation, and patients

can often distinguish between strong beats and the weak beats.

A broad field for clinical study of cardio-vascular disturbance is that of the cardiac neurosis. These cases probably constitute the largest class with which the practitioner is called upon to reckon. These cases may come with ill-defined symptoms or with symptoms so sharply defined as to give us a rather well marked symptom complex. The ordinary classification of this group of cases is:

- A. General cardiac neuroses (with ill-defined symptoms).
 1. Cardiac neurasthenia.
 2. Reflex neuroses.
 - a. Of gastro-intestinal origin.
 - b. Of sexual origin.
 - c. Of respiratory origin.
 3. Toxic neuroses.
 - a. From tobacco.
 - b. From alcohol.
 - c. From coffee and tea.
- B. Neuroses with well-defined symptoms.
 1. Paroxysmal tachycardia.
 2. Paroxysmal bradycardia.
 3. Phrenocardia (Herz).

In all of these various circulatory disturbances whether with hyper or hypotension or arrhythmia together with the various neuroses, even without changes in blood vessel walls, are we likely to have psychical disturbances and how often in consultation with alienists and neurologists do we hear them say "Doctor, the psychic or neurotic condition in this case is circulatory," thus throwing the "burden of proof" back on the general practitioner, and in many cases they are correct in this contention. There is no doubt that in the blood supply to the brain with its delicate mechanism, we have positive symptoms of psychic and neurotic disturbances from increased or decreased blood pressure as well as increased or decreased volume of blood. Conservation of nature seems to be pretty well established in the fact that the cerebral blood vessels have the power of changing their caliber independent of the general arterial pressure. Consciousness and normal mentality and reasoning depend largely upon a sufficient amount of blood reaching the brain, particularly the cortex, and life itself depends upon arterial blood passing through the medullary centers, and while the brain is extremely sensitive to changes in the amount of blood which it receives yet we do not use so frequently now as formerly, the term cerebral hyperemia and anemia (active and passive).

In circulatory disturbances of the brain or without arteriosclerosis we find a number of psychic and nervous conditions, such as (1) Cardiac neurasthenia. Here we have a rather

large group of cases where the subjective symptoms of the patient constitute the entire disease. We may regard this group of symptoms as the expression of the part of the cardio-vascular system of those underlying neuroses, which ordinarily label neurasthenia and hysteria. These cases come to you with severe palpitation (self consciousness of heart beats), with pulse either slow or increased 120 to 150, deep sighing respiration occurring every few moments during otherwise normal respiration,—together with a feeling of anxiety and oppression in the precordial region, the patient picturing the pains and sensations in every conceivable way. In other cases the symptoms from which the patient seeks relief are purely psychical, with mental lassitude, weariness on slight mental exertion, with syncopal attacks and above all, alteration in cardiac rhythm.

(2). Psychic disturbances with delusions and hallucinations, and in many patients with irregular heart action, definite psychoses set in. These cardio-vascular hallucinations and delusions may be due either to anemia or venous stasis in the brain or in the spinal centers. These cases may be associated with high blood pressure either with or without a demonstrable arterio-sclerosis of the cerebral vessels. These cases with fixed or transient delusions may pass rapidly from the field of neuroses to a fixed psychosis.

In addition to the disturbances referable to the respiratory and cerebral symptoms that result from altered cardio-vascular action, we have the various digestive disturbances from circulatory changes. All digestion, assimilation and metabolism depend upon two factors, proper nerve supply and proper blood supply. So in all circulatory disturbances the reflex neuroses which take their origin from the gastro-intestinal tract are frequent and important. The gastro-intestinal disorders find their causes in the circulatory apparatus. In weakened heart action you of necessity have engorgement of the abdominal viscera, particularly the portal system, and the stomach. These follow that line of digestive disturbances with which every physician is so familiar, all of which conditions primarily depend upon circulatory disturbances.

Another type of cardio-vascular disturbances that I think your attention should be called to are those toxic neuroses and vascular disturbances due to tobacco, alcohol, coffee, etc. There is no question that tobacco with its nicotine content is a very frequent source of cardio-vascular disturbance both through its influence on the central nervous system, as well as its effect directly upon the heart muscle, and it is not a question of how much tobacco one uses, as it is the susceptibility of

his nervous system and muscle cells to the irritating poison. It would be interesting to discuss the various methods of using tobacco and the relative amount of nicotine absorbed in each method, but that is not within the scope of this paper. Smoking raises the blood pressure by vasoconstriction, accelerates the heart and respiration, and increases the intestinal movements. In excess cerebral depression may occur, and with the co-existing depression of the vasomotor center may lower the blood pressure to such an extent that collapse may be induced. This is the condition seen in a boy with his first cigar. The effect of alcohol, coffee and tea in producing palpitation and arrhythmia are such common phenomena that I only mention them in this connection as causing cardio-vascular disturbances sufficient to send the patients to their physician, and these factors must not be overlooked in our handling these cases.

Now a few words as to the treatment and handling of these varied conditions as they come to our office. First, in regard to high blood pressure. Treating it either as a part of organic disease with its complex relationship to arteriosclerosis, or apart from organic disease as a symptom of such importance as to demand specific treatment. The handling of these cases depend so largely upon the individual and the control of his habits and modes of life. These should be looked into and carefully scrutinized, and positively controlled. The first inquiry should be directed toward his personal habits and towards his diet. There is no question but that the great majority of patients past the fortieth year eat too much with an excessive consumption, particularly, of proteins. In addition to the absolute restriction and control of diet, and the elimination of tobacco, alcohol and coffee, we have a difficult problem to solve in relation to occupation, mental excitement, and worry. These are factors that require a good deal of acumen in each individual case. I think it is a mistake often to insist that a man engaged in active business or enterprise should suddenly retire and lead an absolutely inactive life. He should lessen his loads and burdens, lessen the fields of his activities and take a certain amount of systematic outdoor exercise and this must be insisted upon. Exercise without fatigue, nutrition without over-stimulation, recreation without excitement.

The amount of water intake, or the limitation of fluid is to be decided in each individual case upon its own merits. Hydrotherapy and electrotherapy in high blood pressure are treatments not sufficiently appreciated. As to the medicinal treatment we have two drugs of value. They are the iodides and nitrites. The iodides should be given in rather small

doses, five grains after meals over a good long period. Gastric disturbances from the iodine can be prevented if given with pepsin. I think that the iodide of potash should be avoided in these cases as much as possible, and I prefer the iodide of strontium. We have a number of preparations to take the place of the ordinary iodides where they produce discomfort, one of the best of these is the preparation, sajodin.

The remedies to be used in our cases of arrhythmia. In these types of cardio-vascular disturbances oftentimes the treatment is referable to the individual as a whole rather than the circulatory apparatus in itself. Here, too, the habits and modes of life must be looked into carefully. Habits as to diet, rest, exercise, the burdens and trials of life, etc., must all be investigated, and corrected within possible and physiological limits. These are the cases where our digitalis group of drugs prove to be so important and effective. You must change your ideas in regard to digitalis necessarily increasing blood pressure, for the rise of blood pressure due to digitalis is largely due to the increased force and output of the heart and not vaso-constriction in front. There are very few if any heart conditions in which it cannot be used with benefit. Strophanthus or its alkaloid strophanthin cause less vaso-constriction than digitalis, and usually affects the minimal pressure less than the maximal. Occasionally it is found that both digitalis and strophanthus actually lower the maximal blood pressure. This occurs especially in cases where the circulation through the medullary centers is impaired by venous stasis or arteriosclerosis or failure of the heart.

"Digitalis has the following actions: (1) it stimulates the vagus, both centrally and peripherally, brings about slowing of the heart, and diminishes conductivity; (2) it increases the irritability, force of contraction, and tonicity of the cardiac muscle in both auricles and ventricles, slight diminishing conductivity by direct action upon the cardiac muscle even in atrophinized hearts; (3) it causes the peripheral blood vessels to constrict, slightly, thereby raising the blood pressure; (4) a diuretic action, mainly through increase in the rate of general blood flow; (5) it causes a constriction of the coronary blood vessels and diminished flow through the walls of the heart."

You must remember in the administration of your digitalis that you have your therapeutic stage, which is within safe limits, as well as your toxic stage, which produces vascular irregularity, and incoordination. One of the objections to the administration of the digitalis group, particularly digitalis and

strophanthus in the official preparations of tincture of fluid extracts, is the extremely bitter taste, and irritating action upon the gastric mucous membrane, producing those gastric disturbances such as nausea and vomiting. These can oftentimes be obviated by the dilution of the tincture in large quantities of water or by disguising the disagreeable dose by combining the drugs in the prescription with tincture of bitter orange peel or of cardamon or some preparation of this kind, or the use of the alkaloids or glucocides, the strophanthin and Cloetta's digotoxine. In fact I am in the habit of using almost exclusively the alkaloid strophanthin in 1-100 to 1-120 grain doses in place of the tincture. In many cases the digitalis group of drugs may be combined and given together with nitroglycerin, sodium, nitrite or erythol tetranitrate. This combination of drugs while in some respects antitheses, unquestionably do better than either given alone, in producing cardiac tonicities and bringing about beneficial effects. Moreover, it is a well-known principal in therapeutics that the combined effect of two equivalent doses of drugs having a common action is often greater than would be produced by using double the dose of either one.

In these conditions of arrhythmia, from whatever cause I very frequently combine in a tablet three minims of digitalis and three minims of strophanthus and 1-100 grain of nitroglycerin to be given over a good long period. Another most excellent drug to be used in conjunction with the foregoing of very great value is nux vomica, or its alkaloid, strychnine, although I believe that in nux vomica with the alkaloid brucine and its glucocide in addition to the strychnia content we obtain very much better results than we do from the use of the alkaloid strychnia alone. In our circulatory disturbances with slight signs of weakness nux vomica is of great benefit. Nux vomica increases tonicity of heart muscle without affecting the force of the beat or changing the maximal pressure. It stimulates both the vaso-constrictors and vagus centers, consequently strychnine is particularly indicated when the vasomotor center is beginning to fail. In such cases as all infectious diseases, in cardiac neurasthenia and asthenias, in mild shocks, and particularly is it useful in those cases accompanied by cardiac asthma as much for its effect in maintaining the activity of the respiratory center as its effect on the heart muscle. It is very often of the greatest value to combine our nux vomica with our digitalis. Another remedy that is of very great value in many of our cardio-vascular conditions is atropine. In this remedy we have the direct antidote to

digitalis. In those partial heart blocks from overdose of digitalis, atropine is a specific. In all of our cases of heart block by the administration of atropine we paralyze the vagi which causes the block to pass off. In most of the conditions characterized by cardiac dyspnoea, atropine with strychnia or digitalis can be given with positive benefit and assurance. The dose should run from 1-120 to 1-60 of a grain. It has a good effect in these cases, also from stimulating the respiratory centers and in conditions of pulmonary edema, atropine is a remedy of great value. The drug of the caffeine series also possess some efficacy in certain circulatory disturbances. In addition to the therapeutic remedies above mentioned, gymnastics, and various systems of exercise, together with pulmonary gymnastics, also hydrotherapy with the various forms of baths, particularly Nauheim baths or the oxygen baths should be resorted to and are necessary in some cases both for the therapeutic as well as psychic effects.

SYPHILIS OF THE HEART.*

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In this paper I shall also consider syphilitic disease of the aorta to some extent, as it is almost impossible to consider one without the other.

With the modern intensive investigation of syphilis, the heart and vascular system have come in for a great deal of study. For a long time syphilis has been supposed to play a considerable part in heart diseases. But this could not be proven conclusively except in those cases where a gumma was demonstrated in the heart. These cases were rare. With the newer methods of staining spirochetes in tissue it became possible to demonstrate that these organisms are frequently found in the heart muscle and aorta. Warthin, of Ann Arbor, has done a great deal of work demonstrating the frequency of cardiac syphilis, as has also Lengecope, proving that the very large majority of aortic heart disease below the age of fifty years is syphilitic in origin. The disease may manifest itself in the myocardium, endocardium, or pericardium.

Warthin describes the pathological process as either parenchymatous or interstitial. The parenchymatous changes being more frequently found in congenital, and the secondary and early tertiary stage. These changes may be very slight, only a paleness or slight fatty degeneration but the areas contain numerous spirocheta pallida. The interstitial changes predominate in the milder and late cases manifested by vascular and peri-vascu-

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lar proliferation. The parenchymatous and interstitial changes are frequently associated. This is very likely to be so if there are marked interstitial changes. Warthin concludes after a careful study that syphilis is the etiologic factor in many cases of heart disease.

Cabot,³ contending that heart disease should be primarily classified according to their etiology, considers syphilis one of the four principal causes.

As to the frequency of cardio-vascular disease in syphilis, Fordyce,⁴ states that he has recently investigated, in his private practice, all latent syphilitics, especially those with a persistent Wasserman, for cardio-vascular disease, and in a large percentage has found the existence of the lesion.

As to the frequency of syphilitic aortitis, foreign observers vary considerably in the percentage of these cases found, but in practically all it is high. Chiari,⁵ found it present in 59 per cent. Stadler,⁶ in 256 cases found aortitis in 82 per cent. Lenz,⁷ states that in large cities 25 per cent. of all syphilitics die from aortitis as against 3 to 4 per cent from paresis, 1 to 2 per cent from tabes.

In regard to the cause of fatal termination in aortitis, Benda found in 95 cases coronary stenosis 9; aortic insufficiency 22; combined coronary stenosis and aortic insufficiency 37; aneurysm 27. In 248 cases he found aneurysm 48 times.

The period when circulatory changes become manifest vary from the early stages to the tertiary or latent period. Marked changes rarely occur until in the late tertiary stage or latent syphilis, although Brooks,⁸ reports a case where aneurysm developed six weeks after the primary sore—and he mentions quite a number of cases where the heart was involved clinically in the secondary stage. Pathological changes were also noted in these early stage of Warthin.

Fordyce finds that the average age at which aortitis begins is 47 to 49 years. Weintraud, Stadler and others give the average time at 20 years from the beginning of the syphilis.

The diagnosis of heart involvement is often very difficult in the beginning. Brooks says the most frequent early sign he has found to be irregularity and rapid action of the heart, especially when strain is added as by mild exercise or nervous apprehension. Pain and tenderness in the region of the heart is not infrequently an early symptom.

Later dyspnoea and tachycardia are present on slight exertion. Angina is frequently observed. Well advanced cases show aortic insufficiency and enlargement of the heart. Accompanying these symptoms there is usually marked increase of blood pressure,

especially increased pulse pressure. When the process involves the bundle of His there are symptoms of heart block, and occasionally Stokes-Adams syndrome.

X-ray examination is of great value, showing the enlargement of the heart, usually the broad heart, and dilatation of the aorta can thus be made out early.

An early diagnosis is especially to be desired, for syphilis is amenable to treatment, and most of the later symptoms can be prevented by proper early treatment.

Brooks,⁹ and other observers have called attention to the necessity of considering syphilis liable to affect the heart as do the infectious diseases like rheumatism, diphtheria, typhoid fever, etc., and to be thus guided in the early treatment of syphilitics, not permitting them to over-exercise as we would do in the above mentioned diseases.

Very slight circulatory disturbances in an individual having had syphilis should be cause for close study of the heart and aorta.

If syphilis is denied a positive Wasserman will often prove the real cause of these circulatory disturbances.

Brooks,¹⁰ says that in his hospital statistics there is 70 per cent of error as regards history of infection, and this in a series in which the diagnosis was made or verified at autopsy.

Prognosis depends on the amount of damage done before treatment is begun. The response of the individual to treatment, and the thoroughness with which this is carried out.

Treatment should be primarily divided into that of early cases and late cases.

Treatment is the radical treatment of syphilis adapted to the individual case as regards the circulatory needs. This usually is mercury given for its effect, and not its name. Some cases respond best to injections of salicylate of mercury, or thorough inunctions with some of the more easily absorbable mercury ointments. Many cases respond readily to mercury by the mouth, but one must be careful in using this method to be sure the patient is really getting the full effect of the drug.

Brooks finds that it is often advisable to change the form of mercury used from time to time.

Iodides are of great advantage in many cases in connection with mercury or when resting from the mercurial treatment, especially in tertiary cases, but treatment by iodides alone is not at all sufficient.

Brooks and Carroll state in "The Treatment of the Heart Involvement in Syphilis" based on a study of three hundred cases: We have extensively employed the iodides, mostly potassium iodid, in the treatment of these

cases of heart invasion. In no instance, however, have we been able to convince ourselves that it acts in any way as a specific. Nor does it, according to our observation, check the progress in an aggressive case. For illustration, we have not found in cases of circulatory deficiency when drugs of the digitalis group failed to act, that results were obtained by combining the administration of the iodid. * * * * * In tertiary cases, however, there is no doubt whatever in our mind but that the iodides materially assist in the clearing up of the infiltration and exudates, and their effect on gummatous tissue is too well established to admit of question. The point which we wish to make is that while it is most useful in the absorptive stages of treatment, it does not act as a true specific.

Salvarsan in early cases offers most gratifying results. In fact cases have been reported where there was an apparent cure after several administrations. Salvarsan in the later cases, where it can be used, is especially advantageous, and adds greatly to the benefit derived from the mercury. But in the severe cases with loss of compensation and kidney involvement its use may be very dangerous. I am sure I have seen cases where if the treatment had have been begun with salvarsan we would have lost our patient, but after the administration of mercury and improvement of the circulatory condition, salvarsan did much good in bringing about a more permanent relief. Treatment of the syphilitic side rather than the circulatory side offers much better results in these cases, but remedies for the embarrassed circulation must be used here as in other types of heart disease. Rest digitalis, strophanthus, morphine, the ice bag must be used when there are indications. However, those cases treated by methods looking to the relief of the circulation alone often do not improve at all, and are very prone to recur rapidly, even if relieved for a time.

Properly treated much can be done for their relief even in those cases which seem very far advanced, and especially is it our business to press the treatment in those cases coming to us early in the trouble.

REPORT OF CASES.

Case I. Mrs. B., female, age 50 years. I saw this woman in 1910. She had contracted syphilis two years previously from her husband. When she came to see me the chief complaint was shortness of breath, and great weakness. On examination the skin showed patches of recently healed syphilides. There were condolomata about the anus. The examination of the heart showed that it was con-

siderably enlarged, the apex being about an inch to the left of the mid-clavicular line. There was no murmur at any of the orifices, but a marked second aortic sound. The pulse rate was rapid, 120 to 130 after slight exercise, and intermitting occasionally. There was considerable substernal pain not radiating into the arms. At this time I was not conversant with the work being done in the treatment of syphilis of the heart. I put this woman to rest, giving her a thorough mercurial treatment by inunction, and only prescribed tincture strophanthus for the heart. She began to improve immediately and at the end of six weeks the myocardial condition had improved much more than I had usually seen in women of her age, I therefore reasoned that the anti-syphilitic treatment must have had something to do with her improvement. I treated the syphilis vigorously with mercury, and iodid of potash for over two years, making her use precaution as to her exercise and habits of life. At this time she seems almost normal. I saw her about six months ago, at which time her heart was in good condition, the rate being about 80 to 90 and regular. She notified me that she sometimes suffers from weakness and dyspnoea on great exertion. She continues to take mercury in some form every now and then.

Case 2. B. H., colored, man, age 52. Saw him in 1910. He was a laborer in a base ball bat factory. His special work required that he carry large amounts of wood on a wheelbarrow up a considerable incline. The chief complaint was dyspnoea, very intense and extreme weakness at times, accompanied by excruciating pain in the precordial region, radiating into both arms. He had contracted syphilis eighteen years previously, and took very little treatment at this time, and had considered himself a very strong and healthy man up to several months before he came to see me. Physical examination showed greatly enlarged heart. He had a slight aortic regurgitant murmur, and great pulsation in the veins of the neck. The pulse was rapid, 110, patient sitting. Blood pressure systolic 240. The urine showed albumin, hyalin, and a few granular casts. On account of the high blood pressure and urinary findings I thought this man's condition must be nephritis. I put him to bed with a modified diet. Very soon the condition of his urine improved markedly, no casts being found at this time. However, the heart condition seemed about the same, therefore I decided because he was a negro and had syphilis many years ago to put him on proto iodide of mercury. I gave him one-fourth grain, four times a day, and advised him to keep his teeth clean. At the end of a month he was

so much improved that he desired to return to work, pain having practically disappeared at this time, although his pulse rate was still rapid. After another month's treatment with mercury I did allow him to return to work, but not to his former occupation, but to an occupation requiring much less expenditure of energy. This man took mercury with an occasional period of iodide of potash for over two years. In this time he had improved very much, and I rarely saw him except occasionally on the street, and he said his heart was feeling very well. Last spring when I was out of the city he began to have a similar condition to that which he had at first. I was not in the city and he consulted another physician. The physician thought his trouble was a heart disease, and was treating with circulatory remedies. He came to see me about six weeks after this, saying that he was not much better. I realized that it was his old trouble, and put him back on mercury and iodide of potash, and he is quite strong enough to do considerable work, and does not complain of any pain in his chest.

Case 3. Mr. X., 42 years old, merchant. I first saw him in January, 1915. His chief complaint was marked dyspnoea on slight exertion. This was frequently accompanied by anginal pain, which was very severe. He also complained of dyspepsia and loss of appetite.

Examination showed a greatly enlarged heart, marked pulsation in upper part of chest and neck. Liver two fingers below costal arch. Very painful.

There was a pronounced regurgitant murmur at aortic and mitral valves. Pulse 100 to 110 sitting. Blood pressure systolic 195, diastolic 55. A very great pulse pressure. Urine contained albumin and hyalin casts. Specific gravity 1024. He had been treated for about ten years by several physicians for heart disease, but he had continued to grow worse. He denied syphilis at first, but when I pressed him he admitted having had it over twenty years ago, at which time he was very reluctant to take three years of what was then considered thorough treatment. He had not however, received any syphilitic treatment for the heart disease.

On examination his blood showed a positive Wasserman, and an X-ray examination of his chest showed a greatly enlarged broad heart. The aorta was enlarged and pulsating. I put him at rest and gave one grain salicylate of mercury by deep injection every five days. The circulatory treatment consisted of tincture strophanthus for one week, and 1-100 gr. nitroglycerine for a short while. At the end of a week he felt a great deal better of the pains and dyspnoea, and I permit-

ted him some little exercise. The salicylate of mercury was continued once a week for two months. At this time he was greatly relieved and the liver was down to normal, and he was working and taking considerable exercise without any but an occasional pain in the chest. His appetite and digestion by this time was excellent. I now discontinued the mercury for three weeks, and gave him iodide of potash during this time. This was followed by a period of inunctions which he took himself, using one of the easily absorbable mercury preparations. After these three weeks more iodide and then one other series of salicylate of mercury injections. He continued to improve and felt much stronger and in better condition than in a number of years. At this time he was given an intravenous injection of salvarsan, and this was again followed by mercury inunctions. At present this man is very well. He attends to his affairs regularly, can walk a long distance without dyspnoea or pain, has gained in weight and in fact feels like he has been made over. However, I shall endeavor to keep him on treatment for at least another year unless there be some contraindication.

Case 4. Mr. Y., age 38 years. Came to me in April 1914, complaining of dyspepsia, swelling of feet and legs. Denied syphilis, but blood showed positive Wasserman. Heart enlarged, pulse rapid and irregular. Greatly increased second aortic sound, slight aortic regurgitant murmur. Liver very greatly enlarged, passive congestion, urine loaded with albumin, hyalin casts. Was given salicylate of mercury in injection, every five days for a month, then intravenous salvarsan. This man improved so much on this treatment that he said he was well and would not return for treatment. However, in July, 1915, he returned saying that in the last several months he had gotten back into his old trouble. At this time an examination showed that he was almost as bad as in the first instance. He was given salvarsan intravenously, and while his response was not as quick as formerly, he was somewhat improved. He was given inunctions of mercury for two weeks and at the end of a month another injection of salvarsan. This has been followed by inunctions interspersed by iodide medication, and now shows great improvement. The blood pressure is practically normal. There is no aortic murmur and the liver is normal in size. Had this patient followed out the treatment advised at first he should be almost ready to remove from syphilitic treatment. As it is he had a much more difficult time in beginning his improvement the second time. However, he is so much improved that I believe he has learned his lesson and will do as he is told.

CONCLUSIONS.

1. Syphilis is the etiologic factor in many cases of heart disease.

2. There is evidence to show that the heart may be involved early in the disease.

3. Syphilis should be treated thoroughly and intensely from the beginning.

4. The heart should always be considered when treating a patient for syphilis, and the slightest circulatory trouble should be given due respect.

5. The vast majority of aortic heart disease below 50 years of age is syphilitic.

6. Proper treatment of early syphilis will in practically all cases do away with heart involvement.

7. Late cases can be greatly benefitted and sometimes cured from a clinical standpoint.

8. In the treatment due attention must be paid to circulatory remedies but scientific treatment of the syphilis really is the important measure.

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DISCUSSION.

Leon L. Solomon, Louisville: The Secretary invited me to open the discussion on Dr. Morrison's paper. I do not know whether this invitation applies now to opening the discussion on the three papers, as they have been included, this morning. If I am in order, Mr. Chairman, I am prepared to speak. What I have to say will be chiefly address to the paper of Dr. Morrison, inasmuch as the time, at our disposal, is not considerable.

The essence of Dr. Morrison's splendid paper and his resume on the subject revolves around the point of what the laboratory has made possible for us, in the last few years. Heretofore, syphilis of the heart was not frequently recognized, because gumma, following syphilitic infection, was not a common finding in the heart. Gumma, elsewhere, is a common finding, but gumma of the heart is not of frequent occurrence, and, inasmuch as we have had heretofore only autopsies, whereby to reach and verify conclusions, and gumma of the heart, being an uncommon finding, the natural inference was, that syphilis should not be construed as a disease, frequently bringing about cardiac complications. Therefore, I repeat, with the newer methods at our disposal, with the laboratory at the beck and call of a

competent technician, in charge of the same, a Wassermann makes the diagnosis of syphilis easy, and, with rare exceptions positive. The clinical diagnosis correctly made and verified by the laboratory findings, the usual remedies applied for syphilis are naturally followed by a betterment in the cardiac condition. In speaking of the laboratory, I mean the modern day Research Department for chemical, microscopical and serological test. In addition, we should not underestimate the great advantage, that has come to us, in diagnosis, from the X-ray Laboratory, and in heart cases, in particular, from the more recent use of the fluoroscope.

I recall with much interest, just now, and a number of gentlemen present, will probably recall an autopsy, performed a few years ago, on a man who had died rather suddenly and who had unquestionably the markings of luetic disease, in the aorta and about the valves. It was before the time, when the spirochete was commonly demonstrated in the aorta and in the cardiac intima, and it was insisted upon, at the time, that we should not conclude this case as luetic, with a history of specific disease entirely negative so far as his family were concerned. The case was autopsied, and therefore, the individual dead could not be questioned, but the family history, so far as could be obtained, from living members, precluded any possibility of syphilis. As I have had the privilege since then, in a number of autopsies of seeing the heart and the larger vessels, I am convinced, to-day, as I was then, and as I then maintained, that the accident insurance companies were not liable for this young man's death, inasmuch as his death was the result of a condition, the pathology of which was plain, and not the result of an acute septic infection, that had preceded it, a few months previous.

Let us see what happened in this condition, in which the heart becomes embarrassed. As Dr. Morrison has said, the chief influence of syphilis is not, probably, in the heart, but in the aorta, and this can be plainly shown. I have observed white plaques, in these cases, that are plainly macroscopic, and that are whitish-yellow in appearance, and, in running your finger over the aorta, you can feel them. They stand out a little elevated. The first thing, in this condition, in all probability, as we see it, to-day, is a lessening in the elasticity of the aorta and herein comes the chief and immediate danger to the heart. The elasticity being lessened, there is lost the "aortic rebound," by which influence the coronaries gather their blood supply. The coronaries thus fail in getting a full blood supply; a long train of immediate pathology sets in at once, due to failure of circulation to the heart muscle, itself, with degenerative changes, myocarditis, and gradual or sudden dissolution.

Curran Pope, Louisville: A number of the

cardiac conditions recounted by Dr. Boggess naturally can only be accurately diagnosed by that marvelous instrument of precision, the electro-cardiograph. The next best method I know of is the fluoroscopic screen, which can point out to us a great many conditions that will be shown in the tracing of the electro-cardiograph.

With regard to tobacco, I want to take one exception to Dr. Boggess' statement, that the nicotine in tobacco is the principal factor in the production of myocardial weakness. As a result of considerable experimental work, particularly in Germany, it has been found that pyridin, the dark nasty substance which collects in the bottom of an old pipe, is the substance that does the most harm.

With regard to the iodids, my own belief is, and I think I quote the authors correctly when I say that the benefit of the iodids when administered is from reducing the viscosity of the blood, so that it can be more readily propelled through the arterial system; that is to say, water will flow easier than molasses. The reduction of blood pressure is a personal equation, and any man or woman who has a high blood pressure for any length of time must in my opinion never be reduced to the normal again. There comes a level at which that patient can live, comfortably and functionally in good condition. When that level is reached, it must be maintained. I have one patient where the instrument would not register the blood pressure, yet that man is to-day living comfortably, usefully, with a maximum pressure of 178. To reduce his blood pressure further is to invite myocardial degeneration.

I was more than pleased with Dr. Boggess' statement of allowing people to go on working. Sweet reasonableness should govern us in these lines. I have seen men, not one but many, in whom the sudden cessation of work meant early and premature death.

Dr. Morrison is right, and we have all neglected the temporary use of the icebag as a cardiac stimulant, but you do not take the icebag, put it on, and let it stay there until the skin becomes anesthetized through the cold, because then you get no benefit from it, because all benefit is derived from the reflexes that arise from the cutaneous stimulation by the cold. But every thirty or forty minutes after the icebag is removed a warm application should be made for a few seconds and the icebag put back, and when this is done the nervous system will respond indefinitely. These cases do well if you take the precaution not to anesthetize the superficial nerves.

Just one word more. Dr. Boggess spoke of neurasthenia and hysteria as being produced by these conditions. Again, I except as our legal friends say. These cases are not neurasthenic; they are not hysteric; they are neurasthenoid and hysteroid. They have nervous symptoms resemb-

ling neurasthenia and hysteria without regarding them as neuroses or psychoses, and it is a very important thing to distinguish and draw the line between the two, and which I have undertaken to do in an article upon the neurasthenoid conditions accompanying malaria, and published several years ago in the Boston Medical and Surgical Journal. These are important things because there is a difference in neurasthenia and hysteria, and you will not correct the condition by correcting the cardiovascular trouble, but by paying attention to the old stage you can bring about a correction of the original condition.

C. W. Dowden, Louisville: There is so much to be said upon a subject of this kind, that it is a difficult matter to know where to stop. There is one point however, of the very greatest importance so far as the patient is concerned, that is, not whether he has a mitral or aortic lesion, or an aortitis, but "how long am I going to live, and how strong is my heart?" This is the point that concerns our patient most and is the thing that we should endeavor to tell him.

We have at the present time, fairly reliable functional tests for the kidneys, liver, and stomach, but none so far that will give us an accurate idea as to the strength of the myocardium.

The most important is the fluoroscope, but unfortunately we do not all possess such an apparatus. There are several formulas for the purpose of determining the strength of the myocardium which are of about equal value.

Tigerstedt tests the efficiency of the heart as a pump by multiplying the pulse pressure by the pulse rate, which equals the velocity of the circulation, and dividing this result by the systolic pressure times the pulse rate, which equals the work of the heart. This may be reduced to a shorter formula, which is the pulse pressure divided by the systolic pressure, gives us the efficiency of the myocardium. Over 40 per cent. indicates a weakness.

The formula of Goodman and Howell is more complicated and depends upon the auscultatory method of taking the blood pressure. The second and third phase of the pressure equals cardiac strength, and the first and fourth sounds equals cardiac weakness.

A normal second and third phase, or the cardiac strength, equals 55.5 per cent., and the first and fourth phase, or the cardiac weakness, equals 44.4 per cent.

The formula therefore follows that cardiac strength is to cardiac weakness as 55.5 is to 44.4. When the cardiac weakness factor exceeds the cardiac strength factor the myocardium is inefficient.

Stone contends that 50 represents a normal load of the heart obtained by the normal figures of systolic pressure 120, diastolic pressure 80, pulse pressure 40, which means that the pulse pressure is 50 per cent. of the diastolic pressure,

Any result above 50 for pulse pressure, therefore, indicates myocardial exhaustion.

Another short formula that has been used quite extensively, is the second auscultatory pressure phase, which, when 30 per cent. or under shows weakness of the myocardium.

I want to hasten to say something concerning treatment.

There are two points in the treatment of cardiac affections that have not been brought out by the essayists or in the discussions that are to me of the very greatest importance.

We get these cases where there is extreme venous engorgement, portal-stasis with ascites, and we give them digitalis, and this, and that, and everything, and they do not improve; and why? Because it has been proven experimentally that portal-stasis interferes with the passage of digitalis in the circulation. If we attempt to open a vein we find that the vessel collapsed and the blood does not flow. In such cases the Kurkell treatment offers more than anything else, and to me is the most valuable remedy in the treatment of cardiac diseases, not even excepting digitalis, because it will work when digitalis fails, and after using it for a few days you can get prompt results from digitalis and stropanthin medication.

The Karrell diet consists in giving from 800 to 1000 c.c. of skimmed milk every 24 hours for a period of five or six days. During this time even water is not allowed and absolute rest must be insisted upon. Usually at the end of this time you will find that the dropsy has disappeared, the irregular heart action has become quiet, and your patient is in condition for digitalis medication.

In those conditions where you have an immense heart due to dilatation, a throbbing jugular vein, (in fact all the veins standing out prominently), and with all the evidence of a rapidly failing myocardium, digitalis frequently does more harm than good.

The safest procedure and one which I have often done, with most excellent results, is to open the median basilic vein and allow a pint and a half or a quart of blood to flow. When this is accomplished give the patient a hypodermic of morphine to secure rest and on the following day, or a few hours later, an intravenous injection of strophanthin or digipuratum. This in a majority of cases restores to a large degree, compensation, and the patient recovers symptomatically where without such a procedure death would undoubtedly follow in a few minutes.

Referring to syphilis of the heart, it should be remembered that the symptoms depend more upon the activity of the infection than its duration, and that to be successful in the treatment, we must recognize the disease early. The first symptoms are the same as in other infections, and a cardiac lesion not otherwise accounted for, re-

sponding to the Wassermann test, makes the diagnosis fairly certain.

The treatment should be both circulatory and luetic.

PUERPERAL ECLAMPSIA.*

By H. T. CROUCH, Bardwell.

Definition: By the terms eclampsia, puerperal eclampsia and puerperal convulsions is meant, in modern medicine, an acute, morbid condition, making its advent during pregnancy, labor, or the puerperal state, which is characterized by a series of tonic and clonic convulsions, affecting, first the voluntary and then the involuntary muscles, accompanied by complete loss of consciousness, and ending in coma or sleep. The diseases may end in death or recovery. (Charpentier.)

Frequency: Statistics records eclampsia to be most frequent during the latter part of pregnancy, less frequent during labor and least frequent in the puerperium. My records, (personal experience) show it to be more frequent during labor. Its frequency is given by various writers as one in every 250 to 300 to 500 pregnancies. In country practice, even in these modern days of progress, you only have to refer to your obstetrical record for 8 or 10 years back when you will be convinced that you, with your colleagues, have had eclampsia to occur at least once in every 200 pregnancies. In these I include the complicated cases with nephritis. Of course, in more thickly populated sections, in cities, and hospitals where, the patients can be kept under close surveillance during the whole pregnant period the percentage can be decidedly reduced.

The pathology of the condition is obscure. 'Tis said post-mortem the changes are, an anemia of the organs generally, a congestion of the brain cortex, occasional slight hepatic apoplexies, and a fluid condition of the blood. The chief changes, diminished urinary toxicity and corresponding increase in amount of circulating poisons. They are rather to be found while alive (intra vitam) than after death.

Etiology: The cause or causes which induces the condition of puerperal eclampsia in the pregnant woman has not been satisfactorily settled. Many theories have been advanced by ardent investigators which are interesting to review but knowing that you are well informed of even the more recent theories offered to solve this most complex problem I shall content myself with the statement, that the consensus of opinion of investigators at the present time is expressed in the word "toxemia" or "uremia," not uremia alone, proper, because pregnancy, labor and the

*Read before the Carlisle County Medical Society.

puerperium is often passed without eclampsia when the patient's urine contains both albumen and epithelial casts, and vice-versa, and also eclampsia has occurred, (even fatal cases) without albuminuria or casts in the patient's urine, so that now modern views, amply lay stress upon, take into consideration not alone albumen and casts, but acetone, free acids, indican and free nitrogen, also including toxemias emanating from the (as to the nature of the poison there is much doubt) liver and the intestinal canal, and the general systemic tissue waste including the circulation of the foetus, is all held for cause in producing the elements of "eclamptic toxemia."

Of the pre-disposing causes of eclampsia, are to be mentioned: 1st, all chronic and acute forms of kidney diseases, including old and recent inflammatory changes, including the so-called recent "kidney" of pregnancy, which results in the failure of elimination, hydremia, albuminuria and oedema; 2nd, long continued and marked retention of urine, particularly that produced by pressure on the ureters. This may occur in an abnormally enlarged uterus such as is seen in twin pregnancies, hydramnios, etc, or small pelvis with large foetus, large foetal heads. In proof of this cause, stand the striking figures of the occurrence of eclampsia in 11 per cent of multiple as against 1.1 per cent. in single pregnancies; 3rd, every young or very old primipara is particularly prone to attack on account of their rigid muscles and the lack of room in their pelvic and abdominal cavities. The proportion of eclampsia in primipara to multipara is three to one, some say four to one.

Exciting causes: Acting in the presence of predisposition may be (1) sudden, partial or complete suppression of urine, (2) constipation, (3) painful uterine contraction or an unyielding or small vagina in primipara. (4) prolonged and exhausting efforts at expulsion, (5) profound emotion, (6) the convulsion once established, the slightest shock, internal or external is sufficient to determine a paroxysm. (Jewett).

Diagnosis: Eclampsia is to be diagnosed, (1) from epilepsy. The history (previous) of the patient and normal urine, etc., will aid in this, (2) hysteria: here also history of patient of similar spells, no real unconsciousness during convulsions, not followed by coma and there is passed the large quantity of clear pale urine, (3) apoplexy: which is rare in pregnancy. It comes on suddenly without prodroma, coma supervenes early. Convulsions are absent, and paralysis evident. I think I've had one case in my practice. Meningitis is even more rare. The history will aid materially in forming an opinion, the convulsions

are local as opposed to general in eclampsia, and they increase in severity by easy stages. Fever always precedes them.

Symptoms are too well known to be repeated in full here, for once seen they are never forgotten and are always dreaded. The attacks are epileptoid in character, being of different degrees of severity and duration, lasting from ten to forty seconds. May be clonic or tonic, or both in type, frothing at mouth seldom noted, but tongue is often bitten. In light attacks patient soon returns to consciousness, when severe, stupor, deep and stertorous breathing and may not return to consciousness. The attacks may be very frequent, every 20 to 40 minutes, as many as 75 to 100 or more has been reported to occur in 24 hours, or they may recur at long intervals, 2, 6 to 12 hours or longer. One attack may prove fatal. Respiration, heart action and circulation, especially of brain often dangerously threatened. Death for mothers is given at about 30 per cent. and children 50 per cent. The most modern statistics places the percentage somewhat lower.

Prognosis is always grave. It is more serious when the convulsions are severe and frequent and when the patient remains unconscious in the intervals, when not at, or near, full term of pregnancy, or, os dilated nor readily dilatable, or any malformations of pelvis or over-size of foetus and when recent acute nephritis of mother. The prognosis is more hopeful when the convulsions are light and infrequent. When patient is conscious in the intervals. When at full term with a dilated or dilatable os uteri. When in the puerperium, when urine is being excreted, and pulse-tension lowered and sweating can be produced and, finally, when the foetus is dead. Schanta has "proved time and again that all disturbances, even those of kidneys, decline after the death of the child, consequently the sooner it dies in repeated attacks of eclampsia the better the prognosis." (Jewett).

Treatment: In discussing remedial measures to combat eclamptic attacks the temptation is too strong to avoid some reference at least, to prophylactic treatment, for, if the symptoms (prodromal) which antedate the eclamptic attacks can be recognized sufficiently early and treated vigorously the seizure can be prevented in the great majority of cases. Although we do not know the nature of the poison which we speak of as a "toxemia" or a "uremia" yet we recognize its presence by some of the following symptoms or signs, headache, mental and physical lassitude, disturbances of vision, spots before the eyes, loss of appetite, gastric and intestinal disturbances, a gradual or rapid diminution of all the excretions, both liquid and solid, a

rapid pulse with unusually high arterial tension, etc. These with or without albumen or casts, as shown by the urine, (albumen and casts no more constitutes our guide in dealing with toxemia of pregnancy). Insufficiency of urea, plus the presence of acetone and free acids and indican. With such symptoms presenting, eclampsia is impending. To prevent it we must hasten elimination of the pent-up poison through the bowels by purgation, through the kidneys by mild diuretics, through the skin by hot baths and hot packs, through the lungs by fresh air, and if an attack seems imminent, from the blood by venesection, the bromides and chloral hydrate may be given to brace up the nervous system and procure sleep and nitroglycerine to aid in reducing arterial tension, grains 1-100 to 1-50. To this must also be added the well-known restricted diet, that is, reduce the amount of nitrogenous food to a minimum, which means milk at first, alone, and as improvement takes place there can be added fish and white meats, butter, toast, vegetables and fruits. Iron for the anemia, in the form of the tincture or Basham's mixture, or some form of the peptonate. This line of treatment will often prevent eclampsia.

If the condition should grow worse and eclampsia seriously threaten, then the question of inducing labor by some method that is rapid and safest to the mother, and empty the uterus at once, has strong advocates as well as strong objectors. Both sides present strong argument for their position. Time will not permit me to review them but, will say that I favor the rapid delivery by such a method that will not produce trauma to the mother, such as manual dilatation of os uteri if required, and forceps or podalic version as indicated for most rapid delivery.

But now it often happens that the physician does not see his patient until labor has begun, and almost without warning he is up against a case of puerperal eclampsia. What is to be done? First try to be calm and quiet the excitement of the attendants, place a cloth wrapped spoon handle between teeth of patient to prevent biting of tongue, loosen clothing about her neck, chest and waist. If the pulse previous to the convulsion was full and of high tension, bleed from vein of arm 10 to 20 oz., according to effect on pulse, when convulsion wears off, if patient becomes conscious and can swallow, give chloral hydrate and bromo potassium xx grs. each in solution. If not conscious give 30 grains each by the bowels, repeat every 1-2 hours to 3 hours, as required to quiet patient. Have chloroform handy to inhale at the least nervous manifestation. If pulse continues above normal in rapidity and especially if much tension give

hypodermic 15 to 20 drops tincture veratrum viride and repeat in 10 drop doses every 30 to 60 minutes, till pulse drops to 60 per minute and keep it there with tincture veratrum as indicated at 1 to 2 or 3 hours intervals. Chloroform, veratrum viride, chloral hydrate and morphine are the most certain and safe medicinal means that we have to combat puerperal eclampsia. Chloroform the quickest for immediate control of the convulsions, veratrum reduces the pulse rate which, when to 60 or below convulsions are practically unknown, it relaxes the rigid os, produces prompt diaphoresis and diuresis, thus aiding in the eliminative treatment. In frail women or weak pulse, use chloroform inhalation, hypodermic morphine, chloral by rectum and stimulation if necessary. In all cases 10 to 20 grains calomel on tongue, for liver and bowels, hot saline high enemas to stimulate kidneys, and hot packs to aid in diuresis. These measures faithfully carried out according to indications has proven to be the most certain for good results in my hands. But should the convulsions continue in spite of this treatment, I then favor the rapid method of emptying the uterus as described under prophylactic measures for the reason that when the child is born the convulsions cease at once or very soon thereafter. In closing will say that some expert operators in lying-in institutions do the Cesarean section for a rapid delivery in urgent cases.

Achylia and Anemia with Chronic Polyarthrit.

—Borries quotes from recent textbooks which state that the internal organs almost always functionate normally with chronic joint disease. Appetite and digestion keep good, except for the frequent tendency to habitual constipation. This statement is the more remarkable, he says, because fully six years before Mering's 1913 manual, and even before Strumpel's were published, Faber and Lange had published four cases of achylia with chronic polyarthritis, and later had encountered it in 50 per cent. of 28 cases, and in 23 per cent. of a still later series of 65 cases (1913). Anemia was evident in 9 per cent. Borries' experiences confirm this frequency of disturbance in stomach functioning and blood production, as he relates in detail. In chronic polyarthritis (gonorrheal or syphilitic origin excluded) in 84 patients under 50, achylia was pronounced in 30 per cent. Including the 21 patients between 50 and 60, the proportion was 37 per cent. These figures become more significant when it is learned that the achylia was found in 15 per cent. of less than two years' duration; in 33 per cent. of the 39 of up to eight years' duration, and in 60 per cent. of the 15 of from eighty to thirty years' duration.

PNEUMONIA.*

By JACOB GLAHN, Owensboro.

Pneumonia an acute inflammation involving the alveoli of the lungs, is designated by the German writers, croupous pneumonia, and by the French writers, fibrinous pneumonia.

Catarrhal pneumonia differs from the fibrinous or croupous form in the seat and character of the inflammation.

It (the catarrhal form) attacks the capillary tubes immediately next the alveoli, and is a catarrhal instead of a croupous inflammation. The so-called lobular pneumonia is nothing more than a catarrhal pneumonia; the changes in the lobules being secondary to the catarrhal process in the ultimate bronchi.

Lobar pneumonia (not lobular)—a very close resemblance in pronunciation, is a fibrinous or croupous pneumonia, occupying and confined to a lobe.

Pneumonia is also known in common language as lung fever, winter fever, etc.,

Croupous pneumonia shall have our attention for the remainder of this manuscript.

Causes: There is a growing belief that pneumonia is a constitutional disease, like typhoid fever and the like.

It differs from other inflammations in that it is self-limited, and terminates by crisis. It is a very common disease, it occurs in all degrees of latitude, under every variety of climate, and at all ages. It is common in infants at the breast, but declines somewhat after the second year—until after the second dentition; and is frequently encountered and is very fatal in the old.

The masculine sex is most frequently attacked, because men are more exposed than women to those external conditions which tend to produce it.

Indoor life, a vitiated atmosphere, excesses, especially alcoholic, and bad hygienic influences of every kind which induce debility, favor attacks of pneumonia.

Certain seasons appear to invite the disease—those parts of the year characterized by humidity and by variability of temperature. In the British Islands winter is the season of greatest prevalence; on the continent, spring; in this country winter and spring, the former especially, hence the name, winter fever.

Occasionally pneumonia occurs in so many persons in a particular district that it may seem epidemic, and there are, probably, subtle atmospherical influences at work to produce the disease, which elude our means of observation.

Here let me add that the germ theory comes

into play, and, pneumococcus is the name applied to this bacillus.

How far this be true, and what offices this particular germ has to perform, I don't know, and I will take it for granted, like most practicing physicians, that the bacteriologists ought to know what they are writing and talking about. Let me now try to construct a clinical picture of this disease. It is a common belief that pneumonia is caused by exposure to cold, especially to draughts, when the body is warm and perspiring.

That catarrhal pneumonia is induced that way no one will dispute, but it is more than doubtful that croupous pneumonia is thus caused, unless there exist a predisposition to it, either of a vulnerable constitution or an inherited tendency to pulmonary disease. Bartholow believes a phthisical tendency to be the chief factor, or that peculiarity in the structures of the pulmonary tissue associated with consumption.

There are diathetic states concerned in the production of pneumonia, as gout, rheumatism, diabetes, the eruptive fevers, and, lastly, chronic alcoholism.

Pathological anatomy. I will not dwell very long on this caption, but slightly touch upon the state of the affected lung in pneumonia.

There are three stages, according to Jaccond, in croupous pneumonia.

First stage, hyperemia or engorgement.

Second stage, exudation or red hepatization.

Third stage, subdivided into two parts, either first, resolution, degeneration and extrusion of the exudation, or, second, purulent transformation or gray hepatization.

Gentlemen, it is not necessary for me to go much further with this section, as the different stages are self-explanatory, that gray hepatization or purulent transformation is a bad state of affairs in the affected lung, always a ready field (soil) for new trouble, you all know, and what it eventually leads to, you all are aware of.

Now I will cite statistics by Juergensen as to what part of the lung is more susceptible to pneumonia inflammation.

The right lung, according to Juergensen's observation, was affected in 53.7 per cent.; the left lung 38.23-100 per cent.; both lungs in 8.7 per cent.

The inferior lobe of the right lung is the point of election, being the seat of inflammation in three-fourths of the cases. So much on pathological anatomy.

Symptoms. There are two modes of onset. In the less frequent there has been a day or two of bronchial catarrhal and general malaise, when some chilliness is experienced,

*Read before the Daviess County Medical Society.

pain is felt in the side, and the disease proceeds in its usual way.

In the other and more frequent mode, a decided rigor is the initial symptom, a rigor more severe than in any disease except malarial fever and pyemia. Elevation of temperature occurs at once, and in the evening of the first day has reached about 104 degrees Fahrenheit.

In infants instead of a chill there may be a violent general convulsion or several of them.

The duration of the cold stage is from a quarter of an hour to three or four hours, and during it the temperature in the axilla shows some slight elevation, and in a few hours not only is the external temperature high, but the subjective sense of heat is great. The face is flushed, the eyes injected there are intense headache, severe pains in the back, and muscular soreness in the members.

The pulse is large in volume and strong in tension.

There is usually a whitish-coated tongue, the appetite is wanting, and there is nausea, or there are attacks of vomiting on the first day.

By the end of the first day or the beginning of the second, there are rational symptoms which indicate the chest as the seat of the mischief. Pain in the side is experienced, and difficulty of breathing and cough now come on. If the pleura is also involved, the pain is more prompt and more acute. Accompanying the pain or coming on soon after it, is dyspnea; the respiratory acts are more frequent and shallow, reaching as high as thirty or forty per minute; the shallowness being due to the pain caused by full breathing, and by the narrowing of the respiratory field.

Facies pneumoniae, or the well-known expression of the face in pneumonia is apparent to all medical practitioners.

The cough, which appears on the first or second day, is very characteristic, it is husky, suppressed and painful.

At first there is brought a little frothy mucus, but on the third day there appear the sputa—characteristic of the disease—thick, viscid material like that which is poured out and coagulates in the alveoli and bronchioles of the lungs. The sputum also contains blood-corpuscles intimately incorporated with the viscid albuminous matter, but in varying proportion of coloring, from light brick-red to a brownish black.

The maximum temperature (axillary) may reach 104 degrees F. in the evening of the first day, and for several days it continues at about 103 degrees; 104 degrees or even 105 degrees;

there being a slight morning remission and evening exacerbation.

The fever pursues this course with little variation—in favorable cases—until the period of crisis, when, just before the deferrescence, a rise may take place. The rise in temperature in anticipation of the crisis is usual, but by no means invariable.

The pulse during the stage of hyperemia is about 100, full, hard and strong, but as consolidation takes place a change occurs in the pulse, it becomes less full or even small, soft and weak. The skin, during the time of greatest fever is inordinant or burning hot, and dry or covered with a warm perspiration. If the skin is relaxed—dusky, cool and covered with a cold sweat—the condition is unfavorable.

Now I could go on and describe the symptoms observed on palpation and percussion and auscultation and speak of crepitant and crepitioredas, of the change in the voice, and of the reappearance of the chlorides in the urine, and of the salty taste in the mouth, and how either the lungs clear off, soon after crisis, or in some diathetic patients an incomplete recovery takes place, etc., but you gentlemen are all familiar with those symptoms, and for fear that this paper might take up too much time, I will pass on to,

Complications. Pleurisy is a frequent complication, the two diseases occurring together in from ten to twenty per cent.

Capillary bronchitis is a very dangerous complication of croupous pneumonia.

Emphysema is an occasional complication.

Pericarditis is more frequently a complication of pleuritis, but it may also occur in the course of pneumonia.

Granular degeneration of the heart-muscle is a serious complication and occurs when temperature is persistently high.

The existence of a typhoid pneumonia is pretty generally admitted, but on questionable evidence. Pneumonia is an occasional complication of typhoid fever, but it is not a typhoid pneumonia. This term is applied to a form of pneumonia occurring in the weak, debilitated, and has, therefore, a specially adynamic character. There is not the fever-process which we designate typhoid; there exists a pneumonia to which a specially adynamic character has been imparted by the depressed state of vital forces. The term has been so far generalized that, in many places, every severe case of pneumonia is called typhoid pneumonia.

Course, Duration and Termination. Croupous pneumonia is a well-defined, self-limited disease, which passes through its several

stages with considerable uniformity. The stage of congestion or engorgement occupies the first twenty-four to thirty-six hours.

The stage of exudation or red hepatization—that period occupied by pouring out and coagulation of the exudation, continues up to crisis, which mark the beginning of the next stage.

The crisis in pneumonia occurs somewhere from the fifth to the eleventh day of the disease, so that the exudation stage lasts from two to eleven days.

The stage of resolution begins with the phenomena of the crisis and lasts two to four days, till convalescence is established.

In the largest number the crisis begins on the seventh day.

In rare cases (abortive form) critical phenomena may occur even earlier than the fifth day.

The whole course of pneumonia is comprehended within three weeks, but favorable cases may terminate in two weeks.

The mortality from croupous pneumonia ranges from five to twenty-five per cent.

In determining a fatal result in croupous pneumonia so much depends on the condition of the individual attacked, or the diathesis with which his system is tinctured, that no comparison of systems of treatment can be accurate that does not take note of them.

Death is usually due to collapse; that is cardiac failure, and obtunding of the nervous centers, with its concomitant symptoms. I will leave this section and say a few words on

Diagnosis. Ordinary well-defined cases are recognized without difficulty; it is the obscure or anomalous forms that occasion mistake.

Pleurisy with effusion is very frequently confounded with pneumonia.

The onset of pneumonia is sudden, by a rigor, and followed by a high temperature; pleurisy begins more gradually, there is chilliness for a day or two, and the rise of temperature is gradual. In pneumonia the pain is rather dull, or a feeling of soreness diffused over a considerable space. In pleurisy, a sharp stitch, which can be covered by a finger in pneumonia there is audible, on inspiration only, a crackling sound—the crepitant rale; in pleurisy the friction sound, synchronous with the respiratory movements; in pneumonia, the crepitant rale is succeeded by bronchophony, which continues; in pleurisy, when effusion partly compresses the lung, a modified bronchophony, but when the lung collapses, all voice and breath-sound cease; in pneumonia, the dullness has a tympanitic quality, and is fixed in position; in pleurisy, the dullness is flat, and changes with the gravi-

tation of the fluid; in pneumonia the organs retain their position; in pleurisy the heart is pushed aside and the liver downward by the effusion.

Pneumonia is self-limited and terminates in crisis; the phenomena are wanting in pleurisy, the duration of which is indefinite. Subsequent to the crisis the behavior of the two diseases is so different that further comparison is unnecessary.

Next to pleurisy with effusion, pneumonia is confounded with catarrhal pneumonia. They differ in onset—pneumonia sudden, with a rigor and pain in the side; catarrhal pneumonia with an ordinary bronchitis and a feeling of soreness, rather than pain under the sternum; pneumonia as a rule is unilateral, self-limited, terminating by crisis, or ceasing within three weeks; catarrhal pneumonia is bilateral, not limited nor terminating by crisis, and indefinite in duration; if double, which is rare, pneumonia is limited to a portion of either lung, while catarrhal pneumonia is diffused over both. The differentiation of bronchitis and croupous pneumonia rests upon the same points. This much on diagnosis.

Now as to treatment of croupous pneumonia. As we have to deal with a self-limited disease, which terminates by crisis between the fifth and eighth day in sixty per cent. of the cases and we possess no specific, it is obviously our duty *not to interfere too zealously in natural processes*, and prevent by our injudicious handling a favorable termination.

The so-called expectant plan of treatment is greatly more successful than the spoilation plan of blood-letting and tartar emetic—so claim the moderns.

Personally, I think blood-letting in any form, but mainly venesection, in suitable cases, and also tartar emetic, do a great deal of good, but to go on, cautious treatment is all the more necessary, since the diatheses are so largely concerned in the origin, the evolution and the termination of this disease. The constitutional tendencies, the actual state, and the surrounding circumstances should receive careful attention in deciding on a plan of treatment.

Of course a vigorous healthy subject will require and bear more vigorous handling than a broken down alcoholic. A well ventilated sick room with pure fresh air is of prime importance.

If seen at the beginning a good dose of quinine, grs. 10 to 20 and morphine gr. 1-4 to 1-2, should be given; to be followed by a brisk purge of calomel and soda, put a hot mustard poultice to chest and a cool compress to the

head; make the patient sweat if possible; a hot flax-seed poultice to chest, and as the disease goes on use some preparation of ammonia, aconite, digitalis, creosote, creosotal and similar antiseptics, etc, just as symptoms should require; the diet should be fluid, and stimulants if necessary. Some authorities (Juergensen) advocate cold baths, similar to the Brand method in typhoid fever, but, gentlemen, I think this method too harsh. After the disease subsides, tonics such as iodide of iron, hypophosphates, turpentine, strychnine, eucaliptol, and cod-liver oil may be indicated in some cases.

The regular school of medicine of which we are all members has from time immemorial taught this eternal truth, the *vis medicatrix naturae*, which can only be mastered by studying the natural law, which is God's law, *it est*, cause and effect, plus an Allwise Providence, thoroughly. By recognizing that there exists in each individual a vital energy, a vital principle which is immutable while it exists in our bodies and which always tries to strike an equitable balance, when encroached upon by abnormal physical conditions and by recognizing these conditions we can meet them with a correct judgment and successful therapeutic treatment.

Faulty philosophies, commercialized diletanteism and fads should never be hastily accepted by the regular school physician, but let them first be proven and then choose the best. This makes for individuality in medicine.

Pneumonic serum is as yet in the experimental stage and still *sub judice*. But as one cannot treat a case intelligently on paper, I will close, thanking you gentlemen, for your kind attention.

Atrioventricular Rhythm.—A case is recorded by Mathewson which displays a rhythmic change in the mode of the heart's contraction. Graphic records showed that the beat was initiated by the sino-auricular and atrioventricular nodes alternately. A corresponding rhythmic change in the first sound and in an accompanying mitral murmur was observed on auscultation. The rate of the beat during the atrioventricular rhythm was either equal to, or slightly less than, that of the periods of normal rhythm. Observations were made on the effect produced by stimulation and depression of the controlling nerves on the heart's mode of contraction. Recurrent increase of vagal tone is suggested as a possible explanation of the alternating rhythm.

THE USEFULNESS OF THE X-RAY AND HIGH FREQUENCY IN THE TREATMENT OF SKIN LES- IONS, ESPECIALLY WITH REFERENCE TO CAN- CER, WITH REPORT OF CASES.*

By VERNON BLYTHE, Paducah.

Before taking up the latter part of this subject which will be the main part of the discussion, I desire to call the attention of those present to the usefulness of the X-ray in certain skin lesions which have baffled the skill of the medical scientist for many generations.

The milder cases of *acne vulgaris* can be successfully handled without the X-ray, but there are many rebellious cases of this unsightly disease which yield to the influence of the X-ray when every other treatment has failed. It is interesting to remember that in nearly all these treatments, it is often helpful to supplement X-ray treatment with use of the high frequency current. While the X-ray treatment continues avoid use of ointments and oily applications which favor burning of the skin.

In *acne rosacea*, a disfigurement which is most distressing and noticeable, the use of the X-ray in connection with electrolysis and the high-frequency current, though not a specific has been of the greatest value.

Constitutional treatment with the closest supervision of the diet is of the greatest importance in the successful handling of all skin disease, of which I shall have more to say under the treatment of cancer. The atrophic action of the X-ray upon the sebaceous glands and the bactericidal effects are very likely the forces at work which cause the disappearance of these unsightly and dangerous lesions.

At this point it will not be amiss to narrate the history of an obstinate case of *eczema seborrhoicum*, which involved several large areas of the scalp, part of the neck and around the ears. Miss H. gave a history of having had the trouble for three years and a half. Faithful treatment with ointments and lotions by reliable physicians had only given temporary relief with return of the trouble very soon after the stoppage of the treatment.

*Read before the joint meeting of the McCracken and Marshall County Medical Societies.

but yields after two months treatment with tincture green soap, a lotion of resorcin, cropped hair in conjunction with frequent use of the high frequency current over the pus forming areas. It has been ten months since the crusts and scales disappeared and there has been no return. The conditions were serious at the beginning of treatment, the extreme itching, pus and bleeding of the scalp after the removal of the large scabs.

Tuberculoiss of the glands, if seen early, have a better show of being cured by X-ray exposure, than resorting to the knife after waiting until they break down, but the treatment is long, continuing over a period of three or four months, after they break down then they should be operated upon and followed by X-ray treatment.

Lupus vulgaris or tuberculosis cutis, as we all know, who have seen it or have had any experience with it, is one of the most stubborn affections to handle in the whole role of skin troubles and has a very distinctive action upon the skin, most frequently attacking the face. Fortunately we do not have many cases to deal with.

Report of Case: Mr. J. Patient gives history of the trouble having begun four years before he came to me for treatment, the lesion involved the alae of the nose and the beard of the upper lip, which was swollen, covered with thick scabs under which was pus. This case had been diagnosed by other physicians as lupus vulgaris and in some way it was the only name which seemed to fit it. It had some characteristics different from cancer. It had given no signs of yielding to the various treatments which had been used but after three months of persistent X-ray exposure the symptoms entirely disappeared and in seeing the patient one and a half years afterwards it had not returned.

Psoriasis is favorably affected by the X-ray 70 to 80 per cent. are cured but relapses are common.

It is not my purpose in this paper to claim that the X-ray and the high frequency currents are the only treatments which are of any use in the treatments of these afflictions but that they have been used with wonderful results in the alleviation of these terrible diseases and that it is our duty to give our patients full opportunity to have their benefit.

EPITHELIOMA AND RODENT ULCER.

There is no field of usefulness in which the X-ray can be more fruitful of splendid results than in the treatment of epithelioma and rodent ulcer. If careful treatment is begun before glandular involvement follows the local lesion, this terrible and appalling disease so insidious in its inception and yet so mutilating and destructive in its end, is entire-

ly amenable to proper application of the X-ray in a large majority of cases. It is not wise to delay operative methods where the growth is rapidly spreading. Judicious use of surgery combined with the use of the X-ray will often yield splendid results. Use the X-ray the first day after the incision if the patient has recovered from the immediate effects of the operation do not wait for the healing of the incision. The location of the ulcer has marked bearing upon the prognosis, for example, a malignant ulcer or epithelioma on the lower lip is of far graver import and more inclined to rapid involvement of the glands than an ulcer on the upper lip, nose or cheek.

It is not the purpose of the essayist to describe the technic of the X-ray treatment but it is necessary for each operator to learn the potentiality of his apparatus and to study the technic of different writers, remembering that the surrounding unaffected area is to be protected and that the operator must use care and caution not to expose himself uselessly to the ray. Short, frequent exposures are of greater benefit than the longer ones.

There is no malady to which mankind has been subjected to, which has caused to arise more quackery and charlatanism in its treatment; so much more the reason why scientists have to be cautious and exact in their statements of any form or method of treatment which they may advocate. It is at this juncture that I desire to report a few cases which have come under my care and treatment.

No. 1. Mrs. M., age 72 came to me August 17, 1909, her vitality was at a low ebb. There showed considerable albuminuria in the urine and also had a chronic indigestion. A large epitheliomatous ulcer of five years or more duration was present on the forehead about two and one-half inches long and one and one-quarter inches in width near the junction of the frontal and parietal bones, the periosteum was gone and the bones had been involved, while a large amount of pus was oozing out from under the matted hair which fell over the borders of the ulcer. I did not hold a hope of cure to the patient, but told her the disease might be checked and partially healed.

Cleanliness persistent dressing and three X-ray treatments a week with careful supervision of patient's diet had in six weeks brought a healing process around 50 per cent. of the area of the ulcer, while the suppuration was entirely checked, in three months over half of the ulcer had healed with white scar tissue. The outlook for perfect control of the disease was good. The patient had to come a distance of 40 miles for treatment and finally the irregularity of visits made it im-

possible to give her the proper attention and she finally gave up the treatment. I saw the patient five or six months later and the ulcer had begun again to take on its sinister appearance. Mrs. M., died in 1912, two years and a half later.

No. 2. Mrs. T., age forty. Epithelioma, duration five years located on the upper lip. the dimension of the ulcer was one and one-quarter inches in length and seven-eighths of an inch in breadth and one-eighth inch in depth. There was pus formation, with scabbing, itching, darting pains and some odor. The patient had to travel twenty-five miles three times a week, she was very patient and it took five months of treatment before she was discharged. The treatments in the last two months did not average more than one in ten days and sometimes two weeks. It has been five years since she was discharged and there has been no return of the ulceration.

No. 3. Mr. R., age 40, ulceration on the lower occipital region, two and one-half inches in length and one and one-half inches in width, with considerable pus and intense neuritis. The patient had lost twenty pounds in weight and was losing a great amount of sleep. The trouble was two and one-half years in duration. Three physicians had been consulted and different ointments had been used without controlling the ulceration. Mr. R., began treatment in September of 1913, it was very stubborn to control but after much patience and persistency a white scar was formed, the distance from the city and the bad weather conditions made the visits more or less irregular, which delayed the healing. The treatment consisted for the most part in the use of the X-ray, with some high frequency current, antiseptic lotions and 10 per cent. ichthyol ointment. After more than a year since the scars formed there has been no evidence of any trouble.

No. 4. Mr. P., age 75 years. Epithelioma of the lower lip, six years duration, unsanitary in his habits, very bad teeth, constant user of tobacco with pipe. The dimensions were two and one-half inches by two and one-quarter inch in depth. The lip lesion was perfectly healed within two and one-half months and never returned but the glands of the neck later became involved and a year afterwards was advised to come to me by his dentist and I found the alveolar tissue and glands of the neck manifesting great evidence of malignancy, of which eventually he died, not being an operable case.

No. 5. Mr. B., age 71, epithelioma of the bridge of the nose, of three years' duration, had not involved the bone or glands as far as I was able to determine. This patient's mother died of the epithelioma of the face.

The treatment was begun in April of 1915, and in two months a perfect white scar was formed and at present there is not a sign of irritation.

The first case of carcinoma to be treated by means of the X-ray was by Stenbeck, of Stockholm, in December of the year 1899. That X-ray treatment does cause a certain percentage of cures in this trouble there can be no doubt. This fact can be demonstrated to anyone who has the liberality of mind and the freedom from prejudice to investigate the reports since the year 1899 of hundreds of authenticated cases, which have been made by truthful and reliable operators and observers.

The great danger of cancer and the grave responsibility which rest upon physicians in procrastination and failing to impress upon the patient the gravity of the situation the necessity to begin treatment early is very serious problem. In very early cases of carcinoma where there is no lymphatic involvement, frequent exposure to the X-ray is imperative, which may render the use of operative measure unnecessary. Where an operation has been performed it is wise not to delay the use of the X-ray until the wound has healed but begin same third or fourth day, there is no necessity to shield the surrounding area.

a. The treatment gives relief from pain.

b. There is a rapid decrease of the discharge.

c. The atrophy of the glands if any remains and healing of the wounds is rapid.

That the X-ray has the power to destroy malignancy, to inhibit malignancy and after operations to prevent the recurrence in a reasonable number of cases there can be no doubt. It is therefore an imperative duty for physicians to give these patients an early opportunity to be benefited by this great blessing of the twentieth century, the X-ray.

My personal experience in the use of the X-ray in carcinomatous cases have been mostly treatment of post operative cases. The success of the treatment here depends largely upon the question of whether the glandular system has escaped the malignancy, if it has the outlook is very good but if there has been any degree of metastasis, the cases are almost hopeless, the local lesion may have remained healed yet the metastasis may cause death of the patient.

There has never been discovered any single definite cause for the development, though there are many exciting causes. There are many combinations which seem to be the cause of cancer, it is a disease of civilization among primitive races it is a very rare affection. Time and the purpose of the paper will not

permit a resume of the different influences working towards the development of cancerous conditions. The relation of diet and the question of defective metabolism no doubt have a great deal to do with contributing to the origin of cancer. So it should be the purpose of everyone who treats cancer to carefully study, amend and alter the food supply of these patients. Surgery, caustics, ointments and X-ray treatments will fail or succeed in many cases according to the dietetic treatment the patient receives.

Cancer is the most appalling problem confronting the medical profession to-day. Its alarming increase during the past three decades as compared with the steady decrease of tuberculosis, makes cancer even more to be feared than tuberculosis. The world now knows the cause of the white plague and how to conquer it but this mysterious malady, cancer, is more or less yet covered by the shadows of the unknown.

A short resume of the mortality statistics from the European countries and the United States concerning the astounding increase of cancer will more than justify the reason why the medical fraternity should warn their friends and patients when early signs of cancer appear to seek immediate relief by the best means.

In the year 1840, the deaths from malignant disease in England and Wales was 117 per million population, in 1905 it was 885 per million, or 1 in each 1,131 population, showing the startling increase of five fold. France also shows a very great increase in the death rate during the last forty years. In 1865 for each 100,000 inhabitants of Paris, 84 died of cancer, in the year 1900, 120 or 1,200 per million died of cancer. These countries represent the height of wealth and culture.

Italy, a poorer country, shows 58 per 100,000 in 1905 but in 1880 there was only 20 per 100,000 deaths from cancerous causes.

In the U. S. there has been a most astounding increase in the death rate during the last two decades, being highest in the northern cities and less in the southern rural districts. New York City had 82 per 100,000 in 1913, Boston, 118; Chicago, 86; and other cities showing an average increase of 8 per cent. of deaths from cancer during the past five years. In 1900 the death rate in the U. S. was 63 per 100,000 and in 1912, 78 per 100,000 with a total number of 50,000 as reported to have died from this disease.

With these terrible facts facing the scientific world it is surely time the medical profession should awaken to their duty and endeavor to stem the tide of death from this horrible malignancy. We can do much if the most efficient means are used early impress-

ing upon the patient the necessity of avoiding quackery and charlatanism, which have been used with such frequency and dire results in these cases, advise against patent medicine venders, steering your patient early along the right paths and they may be able to avoid a fearful death from malignancy.

If we conscientiously do these things we have aided science in advancing another step in proficiency, we have given a blessing to humanity and we have made another breach in the intrenchments of one of mankind's most deadly enemies.

COLLES' FRACTURE.*

By L. L. ROBERTSON, Middlesboro.

Colles' fracture is a fracture of the lower end of radius within about one inch of the articular surface,—is common in adults and is unusual in childhood.

About a century ago Mr. Colles described this fracture bearing his name.

This is the most frequent fracture at the wrist and next to fracture of rib, the most common of all fractures of long bones.

The unbroken periosteum on the dorsal surface plays an important part in the reduction of this fracture. There is often an impaction which is difficult to separate and readjust. The usual method of reducing fractures by extension and counter extension and manipulation of the fragments is not effective in reducing the average type of Colles' fracture. The unbroken periosteum serves to impact, or at least to engage the ends of the fragments and interfere with perfect adjustment.

The wrist and forearm should be caught firmly in the grasp of both hands of the surgeon. By bending the wrist so as to increase the deformity the ends will be released, when by firm pressure with the distal thumb, and if necessary pushing with the proximal thumb and then lifting up the proximal end with the fingers, the two fragments may be slipped so that the edges approximate perfectly, and then by extension of the wrist the normal alignment of the fracture will be effected. When a transverse fracture is so adjusted there is little trouble in holding it in position. The pain is very slight. If such fragments are attended with great pain after adjustment the surgeon should at once verify his diagnosis and treatment. When Colles' fractures are properly adjusted the unbroken periosteum of the dorsal surface locks the fragments together. Such cases are not very difficult of treatment. A simple splint to hold the joint in proper alignment will secure good results.

*Read before the Bell County Medical Society.

A slight flexion of the hand with abduction is a good position but over correction is uncomfortable and harmful.

In Colles' fracture the styloid process of the ulna is broken in probably more than fifty per cent of the cases and must receive proper consideration in the first dressing.

The deformity in Colles fracture is often spoken of by the older writers as the silver fork deformity, direct pressure over the broken bones that elicits pain but crepitus is often undetected until the patient is examined with the aid of an anesthetic.

In many cases of Colles' fracture the wrist may not appear very unnatural. There may be scarcely any deformity. If there is little displacement of the fragments it may be very difficult to determine the existence of a fracture. Any slight differences from the normal, will, under these conditions, be of great value. The X-ray will be of great service in such cases.

Any injury to the wrist, no matter how trivial, should be regarded with suspicion until there is absolutely no proof of fracture.

The most important symptoms of Colles' fracture are pain and tenderness that correspond to the location and line of fracture and that, in the event of no displacement, serve as the only, or at least, as the most important witnesses of the existence of the fracture. When displacement to any considerable extent has occurred the characteristic silver fork deformity leaves no doubt as to the location of the fracture. The power of the hand is diminished or almost entirely lost and pronation and supination are impaired or entirely suspended.

In regard to prognosis the functional result depends more on the completeness of the reduction than on the mechanical treatment calculated to maintain retention. A slight dorsal displacement often remains as an evidence of the existence of a Colles' fracture in the practice of the most competent and painstaking surgeon.

The most important part of the successful treatment of Colles fracture is perfect reduction. In no branch of surgery is there more all-around knowledge, good sense, and skill required than in the treatment of fractures. In my opinion it takes a better surgeon to properly diagnose, reduce and care for the average fracture than to operate on the average case of appendicitis, and when it comes to the more difficult cases, difficult of reduction or of retention, cases with delayed or non-union cases complicated by muscle, joint, nerves or blood vessel injury, it often taxes the ingenuity of the surgeon to its utmost.

In no branch of surgery are failures so frequent nor so apparent to the layman. A badly

set bone is a walking advertisement of the failure of the surgeon, during the patient's life time. Nowhere are malpractice suits so frequent nor so successful as in the fracture cases. It is very easy for the shyster lawyer to exhibit the crooked, stiffened, atrophied or paralyzed arm to the jury and wax eloquent over the ignorance or neglect of the surgeon and the wrongs of his client.

NEWS ITEMS AND COMMENTS

The residence and office of Dr. Gamblin at Burnside was burned, recently. Loss several thousand dollars, partly insured.

Dr. D. W. Gaddie of Hodgenville, read a paper at the meeting of the Muldraugh Hill Medical Society at Elizabethtown at its last meeting.

Dr. R. L. Bone, of Madisonville, will leave for Baltimore where he will take a post graduate course at Johns Hopkins university.

Dr. R. L. Willis, formerly superintendent of the Eastern Kentucky Hospital for Insane, was found dead in his office at Lexington by a patient who had an appointment with him. Indications are that he died of apoplexy.

Dr. William Kenney will leave next week for Chicago, where he will take a special course in medicine. From there he will go to Philadelphia to remain several weeks.

The public school examination committee will examine every one of the 10,000 school children in Hopkins county. Several physicians in the county have offered their services and the examination will cost the children nothing.

Dr. H. C. Chance, a well known physician of Cumberland Gap, Tenn., and a prominent member of the Bell County Medical Society, broke his right arm, just above the wrist, one day last week while cranking his automobile.

The Clinton County Medical Society convened Wednesday afternoon, December 22nd in the Elks' hall at 1:30 P. M.

The annual election of officers was held. The President's address was delivered. An elegant dinner was served in the Elks hall. A good time was had.

Dr. Delia Caldwell has returned home from Chicago after a three weeks' visit to friends and doing clinical work at hospitals. She was accompanied by her nephew, Tom Caldwell, who is attending the University High School at Madison Wis.

Dr. J. H. Taylor was able to go to his office for the first time since he underwent an operation at Mayo Brothers' Sanitarium at Rochester, Minn., some three months ago. He is feeling much stronger now and hopes to be able to resume active practice again soon.

Sam W. Booker has sold his farm containing 280 acres, seven miles north of Shelbyville, to Dr. J. P. Lapsley, of Mercer county for \$120 per acre. Mr. Booker takes in part payment Dr. Lapsley's residence and nine acres of land near McAfee, Mercer county, at \$15,000. Possession will be given March 1.

Dr. C. R. Martin died at his home in Sulphur after having suffered a stroke of paralysis. Dr. Martin had been a practicing physician at that place for many years. He was prominent in his profession and was widely known. He was president of the Sulphur Deposit Bank.

Physicians who divide fees and those who sell morphine and cocaine in violation of law will lose the right to practice in Kentucky, according to rules laid down by the State Board of Health at Louisville. The rule against dividing fees will be enforced against both the physician accepting the fee and the person who gives it.

The office building belonging to Dr. J. B. Smith in McKinney caught fire and burned to the ground. The building was a small structure, located on the corner of Main and Stanford streets in the little city, and it is a mystery how it managed to become ignited. The loss is not large but is complete as it is understood that Dr. Smith carried no insurance.

Governor Stanley has appointed Dr. J. A. Amon, of Lancaster, to be a trustee of the State University. Dr. Amon is a prominent Lancaster physician, and, while a Republican, is a personal friend of the governor. He was appointed to succeed Judge Lewis L. Walker, who recently resigned. Judge Walker was the Republican candidate for lieutenant governor in the last general election.

The Christian County Medical Society met and the following officers were elected for the year 1916: J. Paul Keith, President; J. W. Harned, Secretary and Treasurer; W. W. Durham, Vice President; E. L. Gates, Censor; W. S. Sandbach, State Delegate. The next meeting will be held the third Tuesday in January, and the members of the society will be the guests of Mr. T. L. Metcalfe.

The Henry County Medical Society, at its regular monthly meeting held at New Castle, elected

the following officers to serve for 1916. Dr. Webb Suter, of Campbellsburg, president; C. R. Johnson, of Eminence, vice president; W. B. Oldham, of New Castle, secretary and treasurer; delegate to the State Medical Society, O. P. Chapman of Port Royal.

Dr. P. R. Peters, colored, was fined \$250 in Criminal Court recently after he pleaded guilty of illegally prescribing cocaine. The prosecution also filed away three indictments alleging unlawful prescription of morphine; one charging him with unlawfully prescribing opium and two indictments charging illegal prescription of cocaine. The indictments resulted from the campaign to abolish the sale of habit-forming drugs.

Dr. L. D. Carter had the misfortune to fall and severely injure his left shoulder. The shoulder was dislocated and a bone fractured. He was at the home of a Mr. Havens on little Caney when the accident occurred and it was six or seven hours before the injury had even a temporary dressing.

He is still confined to his room but is improving slowly.

The Grant County Medical Society held its regular monthly meeting at the Carlsbad Hotel in December. Being the regular election day the following doctors were elected for the ensuing year: J. G. Renaker, President; J. G. Marshall, of Crittenden, Vice President; C. M. Eckler, of Williamstown, Secretary and Treasurer; Chas. Felix Dale, Representative to State Society; A. V. Menefee, of Williamstown, Critic. Dr. Dale on behalf of the Carlsbad Hotel invited them to make this hotel their permanent meeting place, which was accepted.

At a meeting of the Muldraugh Hill Medical Society, which met at Elizabethtown, Dr. S. H. Ridgway, of Shepherdsville, was elected president for the ensuing year.

Dr. Ridgway is one of Shepherdsville's leading physicians, and the Muldraugh Hill Medical Society made no mistake in electing him president. He began the practice of his profession at Brooks, in 1894, and his rise has been constant and steady.

He is a public spirited man and takes great interest in all that will help the county and community, and his legion of friends will rejoice at any honor which may come to him. Here's looking at you Doctor.

The McCracken County Medical Society met at the Board of Trade rooms and elected officers for 1916. Dr. Allen H. Shonwell was chosen president to succeed Dr. E. B. Willingham; Dr. J. B. Acree was elected to succeed Dr. E. W. Jackson as vice-president; Dr. C. E. Kidd suc-

ceeded Dr. J. T. Reddick as secretary and Dr. H. P. Linn was re-elected treasurer. Dr. J. Q. Taylor was chosen censor, while Dr. Horace Rivers was named as delegate to the State Medical Association, with Dr. J. T. Reddick the hold-over delegate. Last year Dr. H. G. Reynolds was delegate to the state convention.

Plans were discussed for the annual banquet to be given the first meeting in January which will be the second Wednesday of that month.

Co-operation between the people and the health authorities of Kentucky has reduced the death rate from 45 per 100,000 five years ago to 26.9 during the past year and reduced the death rate from tuberculosis from 225 for each 100,000 population five years ago to 201.6 the past year.

So states Dr. A. T. McCormack in his annual report as secretary of the State Board of Health. The improvement will be still greater, he says, upon a successful conclusion of the movement for the appointment of full-time health officers in each county.

Among the many benefits from the board's work cited is a saving to the people of \$106,800 through the board's attention to persons bitten by dogs or other animals, and who have been given the Pasteur treatment to prevent rabies.

After a lingering illness of tuberculosis, Dr. Marshall A. Stilley, aged 22 years, son of Dr. V. A. Stilley, died at his home at Benton.

Dr. Stilley was a widely known young physician with a promising career. He was a graduate of Vanderbilt University at Nashville, where he won second to the highest honors in his class. It was while studying medicine there that he is said to have contracted the white plague from his roommate. During the summer of 1914 Dr. Stilley served as an interne at the Illinois Central railroad hospital at Paducah. He was a member of the Benton Lodge No. 101, Masons, and also held membership in the Paducah Chapter, No. 30, and the Paducah Commandery, No. 111, Knights Templar of Paducah. The burial was held at 3 o'clock Tuesday afternoon with burial at Benton.

Dr. John McMullen, Government specialist on trachoma in the Public Health Service; Dr. J. N. McCormack of the State Board of Health; Dr. Liggett Bailey, of Madisonville, and Miss Linda Neville, of Lexington, together with Miss Edith Hickey and trained nurses and physicians conducted a free clinic for persons suffering from trachoma at Greenville.

Dr. McMullen gave a lecture on "Trachoma" and Dr. J. N. McCormack lectured on "The New Gospel of Health or Disease Prevention." Mrs. Hickey, visiting nurse for Muhlenburg county examined 4,000 school children in the county and

found 800 cases of trachoma recently. She has also incidentally as many as 200 cases of trachoma of adults. The local club women and business men have provided free hospital accommodations for all who are treated at the clinic and interest in the work is great.

In company with two patrolmen, Dr. W. O. Bullock, of the Board of Health, last night went to the home of Mrs. Mary Craig, a negress, at 190 Adams street, and secured a nine-day-old baby, which was suffering from incipient eye trouble and took it to St. Joseph's Hospital. The mother of the child offered no resistance and accompanied it to the institution.

Last night's act was the outgrowth of the failure of Eliza Smith, a negro midwife, to report the child as a sufferer with ophthalmia-neonatorum. Tests on Tuesday afternoon revealed the child to have the disease which, unless taken hold of immediately, will lead to issuing a warrant for the arrest of the midwife will be reached at a conference of the health officials to-day.

A warrant was issued Tuesday for the arrest of Belle Baker, another negro midwife, who failed to report a case of the disease, and the case will be tried in the court of Magistrate Charles W. Parish Tuesday.

Almost the entire membership of the Bourbon County Medical Society was present at the annual meeting of the society, held in the county court room at the court house.

The meeting was president over by Dr. J. T. Brown, the president of the society. After the reading of the minutes of the last meeting, and the transaction of the routine business, Dr. Granville S. Haynes, of Louisville, read a paper on the subject of "Methods of Rectal Examination, Diagnosis and Treatment," which he illustrated with a large number of lantern slides.

A discussion of the subject followed in which the following well-known physicians took part: Dr. W. O. Bullock, Dr. Woolfolk Barrow, Dr. A. H. Barkley and Dr. Benj. VanMeter, of Lexington; Dr. McDowell, Dr. Moore, Dr. Reese and Dr. Wells, of Cynthiana; Dr. Henry, Dr. Brown and Dr. Ishmael, of Winchester, and Dr. Knox, of Georgetown.

Preceding the meeting at the court house the physicians and a number of invited guests were the guests of the Ardrey Drug Company at a sumptuous banquet given in the dining room of the Hotel Windsor. The party did "ample justice" to the viands, and were well calculated to be in a cheerful frame of mind when the serious business of the meeting was to be carried out.

The physicians of Owensboro were hosts at a luncheon at the Palace of Sweets tendered to the visiting members of the Daviess County Medical

society, which held its regular quarterly meeting in the county court room.

The meeting was called to order with Dr. C. DeWeese, of Beaver Dam, presiding, and with about thirty members of the society present.

The principal paper of the meeting was that of Dr. W. F. Stirman on "The Necessity for an Early Diagnosis of Cancer." After the reading of the paper the subject was presented to the meeting for a general discussion.

An election of officers followed which resulted as follows: Dr. G. L. Barr, of Owensboro, as president; Dr. J. J. Rodman, Owensboro, secretary.

J. M. Stuart of Owensboro, was selected as delegate to represent the society at the State Association meeting at Hopkinsville during September, 1916.

W. L. Taylor, of Curdsville, was selected to act as censor, and R. W. Connor, recently moved to Owensboro from Derby, Ind., was elected a member of the society.

The next meeting will be held on the third Tuesday in March, 1916.

The Russell County Medical Society met in regular session at the Holt Hotel, Jamestown, July 31, 1915, with President L. D. Hammond in the chair. Prayer was offered by Judge J. H. Stone. J. D. Combest was re-elected to membership. This only leaves one non-membership in Russell county who is a retired physician.

The roll was called and the following answered present: L. D. Hammond, J. S. Rowe, J. I. McClendon, J. B. Tarter, J. D. Combest, J. B. Scholl.

J. B. Tarter read a paper on "Tuberculosis." J. B. Scholl read a paper on "How the Doctors and Laity Should Treat Each Other."

J. D. Combest, Rowe, Hammond and McClendon discussed the papers.

The interesting clinic material presented by L. D. Hammond kept the society busy until well into the afternoon session, consequently had to continue Dr. Hammond's elaborate essay on "Puerperal Infection" until the next meeting. If the clinic still continues to increase the society will have to devote the entire day to clinic and hold a two day's session, the second day devoted to the reading of essays. Am glad that the very best people are taking advantage of the free clinic. They seem to just now begin to know or find out the benefit of our society is and has been offering the sick for twenty-three years or more, so my judgment is that if all the doctors would furnish clinical material it would be as much or more beneficial to the society and laity than too many essays. Our assembly hall, the parlors of the Holt Hotel, was fairly well filled, most of the time, with the laity seemingly interested with good attention and behaviour. The hall, with the clinical material abundant, made me think of the clinic at the old university in

our younger days. So upon the whole I will say that our society is progressing in every respect.

On motion and second, it was carried to give the President, Dr. Hammond, power to appoint a physician to visit the public schools in Russell county during the first part of August and make a talk on "Prevention of Disease," all the doctors present sanctioned the resolution and offered his service to any district or precinct the President directed. The following was the assignments made:

Creelsboro and Rowena precinct, J. S. Rowe; West Jamestown and Rowe's Cross Roads, W. G. Flanagan; Wolf Creek, J. B. Scholl; East Jamestown, J. B. Tarter; Russell Springs, J. D. Combest; Webb's Cross Roads, L. D. Hammond.

The doctors are supposed to begin at once and visit every school as indicated above.

Upon inquiry of the society report of only one case of typhoid in the county, no measles, no pertussis, no scarlet fever, no small-pox, no mumps: in fact none of the contagious diseases and but very little sickness of any kind. However, the dread tuberculosis still stays in our county. In fact it has killed more people so far as I can learn than all else. The society is and has been doing all it can to inform people about how to handle tuberculosis and the people are beginning to get alarmed and are assisting the doctors in preventing the spread of tuberculosis and other diseases as a great many begin to believe in preventive treatment.

By invitation, or rather suggestion, the society will meet with the teachers' association at Sunshine, within the next few weeks, the time not having been decided upon as yet. An elaborate program will be offered consisting of teachers, preachers, laity, lawyers and doctors, which will be known as Public Health Day for Wolf Creek precinct. Everybody is earnestly requested and urged to assist in this great public health day.

The Committee on Program and Arrangement, Dr. L. D. Hammond, chairman; Hon. D. C. Hopper, Prof. Claud Haron, Wolford Edmonds, Ben Edmonds, Andrew Stephens and J. S. Stephens. With this committee on program and arrangements will sure leave nothing undone. Dinner and refreshments on the ground. Everybody bring a little "snack" and some for visitors.

The hour getting late for those of us who lived some distance, the society adjourned to meet again shortly as indicated above.

J. B. SCHOLL, Secretary.

At a meeting of the Rowan County Medical Society, which was held at the office of Dr. J. Wilson in Morehead, on the 4th day of November, 1915, the object of which was stated to the meeting by Dr. A. L. Blair, Dr. G. C. Nickell, seconded by Dr. F. Carter, offered the following resolutions which were read and adopted:

Whereas, the State of Kentucky has for many years had upon its Statutes a law forbidding anyone from practicing medicine in any of its branches without first securing a license from the State Board of Health and having the same duly registered in the Clerk's office of the county where the proposed practitioner resides and intends to practice, and

Whereas, a number of men are professing and attempting to practice medicine and holding themselves out to the public as physicians, and have been for the past few years, without in any way complying with the law, and,

Whereas, the State Board of Health has issued positive orders to the local medical societies in each county to ascertain the names of all such persons and to report the same promptly for prosecution, and to that end have offered a reward for the arrest and conviction of all such persons in each case who are practicing or pretending to practice medicine in violation of the law, and,

Whereas, the Judge of the Rowan Circuit Court at the last term of said court held in Rowan county gave to the grand jury a vigorous charge and positive instruction to indict all such persons, now, therefore,

Be it resolved by the undersigned members of the Medical Profession in Rowan County, constituting this Society,

1st. That in order to prevent further violations of the law in this respect we will use our best efforts and influence to bring about the arrest and conviction of any and all persons of whom we learn or have information of trying to practice or of practicing medicine in Rowan county without first having fully complied with the law, and will report all such knowledge and information promptly to this society for the purpose of securing warrants or indictments and prompt prosecution and punishment of all such persons, whether such persons reside in Rowan county or whether they reside elsewhere and attempt to do any practice in this county.

2nd. That we jointly and severally agree to make diligent inquiry among those for whom we practice and of those to whom we are called or who calls upon us in a professional way, and to make inquiry in all other legitimate directions for information as to any persons violating the medical laws of the State, and to promptly lay all such information before this Board and through it before the State Board of Health for immediate and effective action until the unlawful practice is finally broken up.

3rd. That we agree not to prosecute any person who has violated this law in the past who will within 10 days after the receipt of a copy of these resolutions notify in writing Dr. G. C. Nickell, Secretary, of Morehead, Ky.,

that they have ceased to violate the medical law and will not in the future undertake either directly or indirectly to practice medicine without first procuring a license to do so and having same recorded in the Clerk's office as required by law.

4th. That we vigorously and diligently investigate to learn who of any such unlawful practitioners have falsely registered under the Harrison Narcotic Law, and to cause prosecutions to be instituted against all such in the State and Federal Court for false swearing; and that as to all such outlaw practitioners who have failed to register under the said Harrison law, and who have violated same, we procure their indictment in the Federal Court, if possible, for violating the said law.

5th. That a full and complete report be compiled for the use and benefit of the next grand jury with names of all registered physicians and of all outlaw practitioners, and with the names of any and all persons for whom such outlaw practitioner have practiced with information as to the cases, the persons treated, dates and amounts collected in each case.

6th. That a copy of these resolutions be mailed to all persons reported to have been practicing medicine in Rowan county in violation of law within the past 12 months, and a copy also to each registered and licensed physician for use in aiding this society in carrying out its objects in the respect of eliminating outlaw practice of medicine in the county.

Signed: A. L. Blair, Pres.; G. C. Nickell, Sec.; F. M. Carter, A. Scaggs, Thos. A. E. Evans, J. Wilson, S. J. Porter, F. K. Blair, A. J. Davis, F. M. Thomas, Allen W. McCleese.

Detection of Tendency to Epilepsy.—Jellinek lists the points which differentiate a true epileptic seizure from a hysteric spasm. Among them he notes that in true epilepsy the face muscles twitch predominantly while in hysteria the muscles of the trunk or limbs are most affected. With epilepsy the spasmodic movements are synchronous on one side of the body. In hysteria it is the whole of the upper part of the body or the legs alone that are mainly affected. After an epileptic seizure the individual feels prostrated and takes long to recover, while recuperation is rapid and complete after a hysteric attack. He adds that the Babinski toe sign, planter flexion of the big toe, seems to be a reliable sign of true epilepsy. He found it constant in all his cases of epilepsy while the sign could never be elicited in any of his numerous hysteria cases.

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NEXT MEETING STATE ASSOCIATION.
HOPKINSVILLE, 1916

COUNTY SOCIETY REPORTS

Bell—The Bell County Medical Society held its annual meeting at Pineville and the following officers were elected.

F. D. Haston, President; S. J. Jones, Vice President; O. P. Nuckols, Secretary and Treasurer; J. G. Moss, Censor.

A full report will be sent in later.

O. P. NUCKOLS, Secretary.

Breckinridge—The Breckinridge County Medical Society met in the office of John E. Kincheloe, December 9th, 1915, with the following members present: S. P. Parks, L. B. Moreman, E. O. Ferguson, J. W. Meador, R. W. Meador, A. M. Kincheloe and John E. Kincheloe. The essayist was absent.

S. P. Parks read a most interesting paper on "Typhoid Fever."

The following officers were elected:

L. B. Moreman, Irving, President; J. H. Sandbach, Garfield, Vice President; Geo. E. Shively, Stephenport, Delegate; John E. Kincheloe, Secretary and Treasurer.

The society adjourned to meet on the regular meeting day, March, 1916.

JOHN E. KINCHELOE, Secretary.

Boyle—The December meeting of the Boyle County Medical Society was held in the parlors of the Elks Club at Danville, December the 14th, with the following members present:

Geo. Cowan, J. R. Cowan, D. M. Godbey, J. E. Caldwell, Fayette Dunlap, J. R. Steele, Vance Rawson, F. H. Montgomery and T. R. Griffin.

Several communications from the Secretary of the State Society were read and freely discussed by the society.

A committee of three was appointed by the President to study and report to the society on the proposed Full Time Health Officers Bill. On this committee were appointed Dr. Montgomery, the present County Health Officer, with Drs. Caldwell and Dunlap.

The officers of last year were unanimously re-elected. The secretary was ordered to send a congratulatory letter to W. O. Hopper, of Perryville, on his return from Rochester, Minn., where he was operated for duodenal ulcer and appendicitis.

All members present paid their dues for the year 1916.

THOS. R. GRIFFIN, Secretary.

Clay—The Clay County Medical Society met on the third Wednesday in December, 1915. There were eight members present and the following officers were elected for the ensuing year:

President, P. J. Keith; Vice President, C. B. Maren; Secretary and Treasurer, J. L. Anderson; Delegate, J. L. Anderson.

Several case reports, all of which were interesting, were made. We are going to have a better society in the year 1916. Our next meeting will be held February 16th, 1916.

The subject for discussion at the next meeting is "Toxemias of Pregnancy," papers to be read by **Drs. Ricketts, Keith and Marcum.**

J. L. ANDERSON, Secretary.

Calloway—The Calloway County Medical Society held its annual meeting Wednesday, December 8th, 1915, and the following named officers were elected:

C. H. Jones, President; W. G. Johnson, Vice President; W. H. Graves, Secretary and Treasurer.

W. H. GRAVES, Secretary.

Caldwell—At the annual meeting of the Caldwell County Medical Society held in Princeton on Tuesday, December 14, 1915, the following officers were elected for the ensuing year:

J. M. Moore, of Princeton, President; W. P. Morse, of Farmersville, Vice President; W. L. Cash, of Princeton, Secretary and Treasurer; J. J. Spickard, of Fredonia, Delegate to the State Association; I. Z. Barber, of Princeton, Alternate Delegate; P. R. Shelby, Princeton, Frank Walker, Farmersville, and C. J. Pollard, of Princeton, Censors.

Several communications were read by the Secretary and a general discussion of various topics followed. A motion to adjourn carried.

W. L. CASH, Secretary.

Carter—The Carter County Medical Society met in regular session at the office of G. B. O'Roark, December 14, 1915, in Grayson. The following members were present:

W. A. Horton, J. W. Stovall, G. B. O'Roark, H. B. Fraley.

In the absence of T. T. Boys, President, J. W. Stovall was made temporary chairman. On motion W. A. Horton was elected President for the year 1916; H. B. Fraley, Vice President; G. B. O'Roark, Secretary and Treasurer.

The Federal dope law was discussed by all members present, as also was the All Time Health Officers Bill.

Resolved, That the Carter County Medical Society heartily endorse the All Time Health Officers Bill, and request their State Senator and Representative to cast their vote for same.

The secretary was authorized to mail a copy of the resolutions to State Senator Stewart and Representative Gearheart.

The secretary read the Medico-Legal Report of the committee.

Other topics of interest were discussed.

The meeting proved to be a very enjoyable and interesting one.

There being no further business, the society

adjourned to meet again the second Tuesday in January.

G. B. O'ROARK, Secretary.

Carlisle—The Carlisle County Medical Society in the absence of the President, Dr. H. T. Couch was met in the I. O. O. F. hall at 10 o'clock, and in elected to preside. Elder Morris opened the meeting with prayer.

The Committee on Arrangements reported that the hall had been provided for the meeting place and that dinner would be served at the Hotel Richardson. Report of Committee on Revision of Fees was deferred to afternoon session.

H. T. Crouch read a paper on "Colds, Causes and Their Treatment." J. T. Marshall and followed by W. L. Mosby. Hocker, Payne, Burrow, opened the discussion, and closed by H. T. Crouch.

D. S. Robertson failed to read a paper on "Scarlet Fever."

G. W. Payne read a paper on appendicitis after which society adjourned for dinner.

At 1 P. M. the society reconvened, President Gilliam in the chair, and the paper on "Appendicitis," was discussed by Drs. Masby, Marshall, Hocker, Peas, Crouch, Burrow, Payne closing.

Letter from Tuberculosis Commission read and discussed and a committee composed of the following was appointed to investigate and report at next meeting, J. T. Marshall, Mosby and Hocker, with the President and Secretary-elect.

Ex-member of the society, Dr. Lamkin was present and made a talk on his loyalty to the profession and society, stating that while he was not practicing law that he would not take a case for malpractice against a doctor, and the society extended him a vote of thanks for his expression of good will and loyalty.

The following officers were elected for the ensuing year:

T. A. Peas, President; D. S. Robertson, Vice President; Wm. L. Mosby, Secretary; G. W. Payne, Treasurer.

The above officers were duly installed.

H. A. Gilliam read his presidential address, which was well received and will be printed in the Journal with other papers read at this meeting in proper order.

The secretary read a report of the Medico-Legal Committee in full and Dr. Mosby offered a resolution extending a vote of thanks for faithful and efficient work being done by the committee for the profession of the State, etc.

W. L. Mosby made motion to request each member of our society to see personally and also to write a letter to our Representative and Senator to favor the Whole-Time Health Officer Bill, to come before our next legislature and Senate. Carried.

T. L. Lamkin made application for membership in the society, stating that he might never prac-

tice medicine again but never in Bardwell at least, but a vote of the membership was unanimous that he was ineligible on account of "practicing law" and not being "engaged or going to engage in the practice of medicine." Drs. Crouch Payne and Mosby were appointed as a committee to inform the doctor as to the society's action in the matter.

W. L. Mosby read the report for the revision of fees and same was deferred for a special meeting to consider its adoption at a later time.

Claim of ninety-two cents was allowed Dr. Marshall for postage for two years. Crouch, Mosby, Payne, Marshall and non-members Drs. Gohlson, Lamkin and Burrows, Committee on Necrology Drs. Hocker, Couch and Marchall. Committee on Arrangements, Drs. Hocker, Jackson and Dunn.

Dr. Dunn was appointed on the Board of Censors for the term.

Arlington was selected as the place for the next meeting, March 7th, 1916.

The society then adjourned.

WM. L. MOSBY, Secretary.

Daviess—The Daviess County Medical Society met in regular quarterly session at the county court room, Owensboro, on Tuesday, December 21st, 1915. The President, C. DeWeese, presided and there were twenty-seven members present.

A confidential report from the Medical Defense Committee was read and filed.

The secretary and treasurer reported \$91.16 in the treasury, and he was re-elected.

The annual election of officers was held and resulted as follows:

President, George L. Barr; Vice President, John M. Clayton; Secretary and Treasurer, J. J. Rodman; Delegate, J. M. Stuart; Censor, W. L. Tyler.

Adjourned to take dinner at the Rotary Club Rooms, with the Owensboro Medical Society. Before leaving the dining table, Dr. W. F. Stirman read a very interesting paper on "The Necessity of an Early Diagnosis of Cancer."

The paper was generally discussed.

Adjourned to meet March 16th, 1916.

J. J. RODMAN, Secretary.

Fayette—The Fayette County Medical Society at its annual election of officers December 14th, which was followed by a banquet, chose Charles A. Vance as president, to succeed J. C. Lewis, president; L. C. Redmon, secretary and treasurer; Other officers elected were L. C. Simmons, vice L. C. Redmon, delegate to State Association; R. Julian Estill, censor.

Greenup—The Greenup County Medical Society held its monthly meeting at the office of H. T. Morris. Greenup. Society called to order by

the President, C. E. Vidt. Members present were, Drs. Vidt, Morris, Meadows, Franz, and Fitch.

M. W. Meadows gave talk on "Scarlet Fever," which proved very interesting. Discussed by H. T. Morris, W. S. Morris, Fitch, Vidt and in closing by Dr. Meadows.

The subject of "Diphtheria" was also brought up and freely discussed.

The election of officers for the ensuing year resulted as follows:

President, H. T. Morris; Vice President, M. W. Meadows; Secretary and Treasurer, C. E. Vidt.

W. S. Morris, of Old Town, was taken into the society as a member.

Next meeting at Fullerton, Thursday, January 6th.

C. T. VIDT, Secretary.

Grant—The Grant County Medical Society met December 15, 1915, with the following members at the Carlsbad Hotel, Dry Ridge, Wednesday, present; J. F. Tomlin, A. V. Menefee, J. L. Price, J. J. Marshall, C. A. Eckler, W. B. Robinson, J. G. Renaker, A. D. Blaine, Chas F. Dale and C. M. Eckler.

The following officers were elected for the year 1916: J. G. Renaker, President; J. J. Marshall, Vice President; C. M. Eckler, Secretary and Treasurer; Chas. F. Dale, Delegate to the State Association; W. B. Robinson, Alternate; J. L. Price, J. F. Tomlin, C. A. Tekler, Censors; A. V. Menefee, Critic.

Charles F. Dale, formerly of Lexington, now of Dry Ridge, was elected to membership at this meeting.

This was a most excellent meeting and things look good for a substantial improvement over 1915.

C. M. ECKLER, Secretary.

Harlan—The Harlan County Medical Society met December 4th and elected their officers as follows:

Arthur Jenkins, President; L. H. Boone, Vice President; E. M. Howard, Secretary and Treasurer.

We had a very good meeting, several members present.

Wm. M. Martin read a paper on "Typhoid Fever," which subject was well dealt with and a very liberal discussion by the members following the reading of the paper.

E. M. HOWARD, Secretary.

Henderson—The Henderson County Medical Society met in annual business session at the Public Library building in Henderson, December 13th, 1915, President Neel in the chair.

Those present were, Drs. Neel, Dixon, Stone, Busby, Moseley, Dunn, Quinn, Letcher, Floyd, Ligon. The secretary, Dr. Ligon, was called away and Dr. Floyd acted as secretary.

The following officers were unanimously elected to serve for the year 1916:

President, J. C. Mosceley, Henderson; Vice President, E. L. Busby, Zion; Secretary and Treasurer, Peyton Ligon, Henderson; Delegates, J. W. Stone, Henderson, Wm. M. Floyd, Henderson; Alternates, C. F. Negley, Zion, Geo. M. Royster, Smith Mills; Censor, M. C. Dunn, Henderson.

James H. Letcher and Wm. M. Floyd were appointed to draft resolutions setting forth reasons for a Whole Time Health Officer. A copy of said resolutions to be sent to our Senator and Representative. A committee composed of Drs. Stone, Letcher and Dixon was selected to draft resolutions upon Dr. Vance, President of the State Medical Society.

PEYTON LIGON, Secretary.

Harrison—The Harrison County Medical Society held the annual meeting at the Elks Home, December 6, 1915. Our attendance at this meeting including visitors, totaled twenty-five doctors. Our visitors were W. O. Bullock, Lexington, Daughtry, Orr, Stearns, and Varden, of Paris.

W. O. Bullock read a most excellent paper on "Surgery of Vascular System."

C. G. Daugherty reported an interesting case of "Congenital Dilatation of Colon."

The society voted unanimously on motion that the President appoint a committee to call on our representatives and urge them to support the Whole Time Health Officer Bill.

Election of officers resulted as follows: J. P. Wlyes, President; J. E. Wells, Vice President; W. B. Moore, Secretary; B. B. Petty, Treasurer; M. McDowell, Censor; W. H. Carr, Delegate.

The society adjourned to the dining room where an elegant lunch was served. Here two very pleasant hours were spent in listening to after-dinner speeches, jokes, etc. Then Dr. Givens read an original poem, which we trust he will send to the Journal for publication. Every one departed feeling that a good society is worth easily more than it costs to make it such.

W. B. MOORE, Secretary.

Hopkins—The Hopkins County Medical Society met in regular session on December 2nd, in the county court room at Madisonville, with the President, Dr. Townes, in the chair. The following members were present: Drs. Bone, Harroldson, Strother, Sory, Johnson, Arnett, Corum, Veal, Thompson, Townes and Sisk.

A committee composed of Drs. Sory, Strother and Bone was appointed to prepare suitable resolutions asking our representative and senator to support the "Whole Time Health Officer Bill" in the next legislature.

A committee composed of Drs. Strother, Sory and Thompson was appointed to arrange a program for the year and ascertain from the mem-

bership whether they will prepare a paper without fail. It is the intention of this committee to arrange for special talent from the outside in order to stimulate a better attendance this year.

Officers for the ensuing year were elected as follows:

C. R. Morton, President; M. S. Veal, Vice President; A. O. Sisk, Secretary and Treasurer; I. J. Townes, Delegate; R. H. Harroldson, Alternate; A. L. Thompson, Censor.

A. O. SISK, Secretary.

Henderson—At the annual meeting of the Henderson County Medical Society, held December 13th, 1915, Dr. J. W. Stone, Dr. Arch Dixon and Dr. James H. Letcher were appointed a committee to draft resolutions on the death of Dr. Ap. Morgan Vance.

Your Committee beg leave to submit the following report:

Resolved, First, That by the death of Ap Morgan Vance the City of Louisville, the State of Kentucky and country at large, have sustained the loss of a great and good man.

Second, That, to the medical profession of Kentucky, most of whom knew, admired and loved him, the loss is an irreparable one.

Third, That he was honest, straightforward, capable and with a faculty for making others happy which had no superior and but few equals.

Fourth, That he stood as a beacon light to the younger surgeons of his home and State guiding them in their work, ever encouraging them by his glorious example to strive for higher efficiency, and greater endeavor in the work of saving the lives and alleviating the sufferings of his fellow men.

Fifth, That in his service as a citizen, apart from his splendid work in surgery, the new City Hospital, in Louisville, will ever stand as a monument to his memory, and those who occupy its wards will often whisper words of prayer for the rest of his soul, and speak words of gratitude to the memory of him who, perhaps more than any other made possible this splendid home for the relief of the sick and suffering.

Sixth, That in the homes of the poor Doctor Vance will be sadly missed, for in these homes, without the hope of fee or reward, with a firm hand and a big heart, and ample brain he ministered to their wants, healing their wounds and soothing their suffering,

"The well-beloved of all his peers,
But by the poor almost divine."

Seventh, That "His life was a life of sacrifice, of service, of success well won and worn worthily, living he did not lack for honor among his own people. Dead, his place with them will not soon be filled."

Eighth, That the Henderson County Medical Society, to the members of which Doctor Vance was well known, and to some of whom his death

was a personal loss, extend to his wife and family assurances of its deepest sympathy.

spread these resolutions on a separate page in Ninth, That the Secretary be instructed to the records of the Society. And that a copy be sent to his wife, and to the Kentucky Medical Journal.

J. W. STONE,
ARCHIBALD DIXON,
J. M. LETCHER,
Committee.

Jefferson—The following officers were elected by the Jefferson County Medical Society for the ensuing year of 1916:

J. Garland Sherrill, President; B. J. O'Connor, First Vice President; Oscar E. Bloch, Second Vice President; E. Owsley Grant, Secretary; Albro L. Parsons, Treasurer.

In the Judicial Council two new members elected to serve until 1918 were: Sidney J. Meyers and C. H. Harris.

Membership Committee—Chas. Farmer, Chairman; I. A. Arnold, Alex. Griswold, Roy Carter.

Program Committee—G. C. Forsee, Chairman; C. G. Arnold, Jno. Van D. Bedinger.

Clinical Cases and Specimens—J. B. Lukins, James Bruce.

Executive Committee—Chas. Hibbitt, Chairman; Guy P. Grigsby, W. O. Doherty.

Library Board—Henry Rubel, Chairman; A. V. Griswold, P. F. Barbour, Lee Kahn, Henry Enos Tuley, Irving Lindenberger, Della Hertzsch, Jno. J. Moren, Jos. W. Fowler, Mr. Geo. T. Settle, Supt. Louisville Public Library.

Taylor—The Taylor County Medical Society met in annual session at the New Merchant's Hotel, December 16, 1915.

Present—O. M. Kelsay, S. H. Kelsay, O. R. Reesor, J. B. Buchanan, C. V. Hiestand, W. R. Elrod, E. L. Gowdy, and J. L. Atkinson.

Minutes of the October meeting read and approved. The society then read the report from the Medico-Legal Committee.

Officers for 1916 were elected as follows:

O. M. Kelsay, President; O. R. Reesor, Vice President; J. L. Atkinson, Secretary-Treasurer; C. V. Hiestand, Delegate; E. L. Gowdy, Alternate Delegate; W. R. Elrod, Censor.

On motion of Dr. Gowdy the society gave the secretary a vote of thanks for his untiring work for the society as secretary.

The secretary expressed to the society his appreciation for their vote of thanks, and also for their loyal support and assistance in the good work being done by the society.

At this juncture supper was announced and the society repaired to the dining room where was found spread a most bountiful banquet prepared by Mr. and Mrs. Hoskins. The tables presented a beautiful, inviting and appetizing appearance,

and our appreciation of the good things prepared for us was shown by the hearty gastronomic discussion of each course as it appeared. After the feast was despatched the toasts followed in a happy vein.

TOASTS FOR THE BANQUET.

Toastmaster J. B. Buchanan

For it's always fair weather,
When good fellows get together.

"The Country Doctor," C. V. Hiestand
How far that little candle throws its beam,
So shines a good deed in a naughty world.

"The Ladies" S. H. Kelsay
It's a long, long way to Tipperary,
But my heart's right there.

"Medical Ethics," F. I. Buckner
Princes and lords are but the breath of kings,
An honest man's the noblest work of God.

"What Next," J. L. Atkinson
Grow old with me: the best is yet to be,
The last of life for which the first was made.

"Reminiscences," O. M. Kelsay
The south wind searches for the flowers,
Whose fragrance late it bore,
And sighs to find them in the woods
And by the streams no more.

J. L. ATKINSON, Secretary.

Laurel—The Laurel County Medical Society met December 15, with the following members present: J. I. Smith, H. V. Pennington, Wm. Johnson, G. S. Brock, J. C. Johnson, J. A. Acton, O. D. Brock. Meeting was called to order by President J. I. Smith, and after reading of the minutes the society proceeded with the election of officers and the following were elected:

Wm. Johnson, President; G. W. Phillips, Vice President; O. D. Brock, Secretary; G. S. Brock, H. V. Pennington, Censors.

J. C. Johnson, of the U. S. Public Health Service, gave us an interesting and instructive talk on "Trachoma," which was discussed by Drs. Johnson and Pennington.

The society then adjourned.

OSCAR D. BROCK, Secretary.

McCreary—The McCreary County Medical Society met at Stears at 10 A. M., in the office of W. R. Cundiff.

The following members were present: W. R. Cundiff, J. E. Harmon, H. W. Fitzpatrick, Reuben Smith, C. E. Cain and R. E. Sievers. Minutes of last meeting were read and approved as read.

Reports of cases were heard.

This being the day for the election of officers, the following men were elected by unanimous vote:

W. R. Cundiff, President; H. W. Fitzpatrick, Vice President; R. C. Sievers, Secretary and Treasurer; J. E. Harmon, Delegate to the State

Medical Association: C. E. Cain, Reuben Smith, and J. E. Harmon, Censors.

It was regularly moved and seconded that the society extend its thanks to the secretary for his faithful work during the past year. Motion carried.

All those present paid their dues for next year.

The program for next meeting was arranged as follows:

C. E. Cain, will read a paper on "Pneumonia in Adults."

W. C. Stephen, will read a paper on Pneumonia in Infants."

H. W. Fitzpatrick will read a paper on "Diphtheria."

The society adjourned to meet again on the second Tuesday in January at 10 A. M.

R. C. SIEVERS, Secretary.

Mason—The Mason County Medical Society at its annual meeting elected the following officers for the ensuing year:

W. H. Taulbee, President; C. McGuire, Vice President; J. H. Samuel, Secretary; S. R. Hanover, Delegate; Joseph Browning, M. Pollock, A. R. Quigley, Censors.

J. H. SAMUEL, Secretary.

Perry—The Perry County Medical Society met in called meeting December 29th. The new officers for the year 1916 were elected as follows:

President, Geo. Morgan; Vice President, M. C. Combs.

The matter of using 1 per cent silver nitrate in all new born babies' eyes was put before the house and unanimously adopted.

The second Monday in each month was voted to be the regular meeting day.

TAYLOR HURST, Secretary.

Fike—The Pike County Medical Society met in the office of Judge H. H. Stallard, December 14, 1915, with the following members present: H. H. Stallard, J. W. Vicars, J. W. Stephenson, R. S. Johnson, M. A. Lenton, Z. A. Thompson, P. C. Sanders, and W. J. Walters, all of whom paid their dues. The following officers were elected for the year of 1916:

H. H. Stallard, President; M. A. Lenton, Vice President; W. J. Walters, Secretary and Treasurer. R. S. Johnson was elected Censor to fill out the unexpired term of Dr. Chrisbolt who had moved out of the county. J. W. Vicars was elected Censor for three years and until his successor is elected and qualified.

E. P. Walters, of Virgie and M. A. Moore, of McVeigh, were elected members of the society, their application and dues having been previously been received. On taking the vote it was unanimously decided to reinstate J. T. Deskins, when his dues were paid.

The following program was reported for next

meeting:

P. C. Sanders will read a paper on "Spasmodic Croup."

M. A. Lenton will read a paper on "Pneumonia in Children."

J. W. Stephenson, will read a paper on "Pneumonia in Adults."

By suggestion of Dr. Thompson it was decided to have no meeting in January.

There being no further business the meeting was adjourned, until the first Monday night in February, 1916.

W. J. WALTERS, Secretary.

Rockcastle—The regular meeting of the Rockcastle County Medical Society was held in the Secretary's office, Thursday, December 9, 1915.

The petition of E. W. Walker, of Livingston, was accepted and he was made a member of the society.

A. G. Lovell and **Walker Owen** discussed the "All-Time Health Officer."

The following resolutions were unanimously adopted:

1st. We favor the passage of a law requiring an All-Time Health Officer."

2nd. We urge the compliance of all physicians in reporting and sending in all statistics pertaining to contagious and infectious diseases immediately.

3rd. That each individual physician do all in his power to urge trachoma patients to attend one of the various trachoma hospitals.

The election of officers for the ensuing year resulted as follows:

President, A. G. Lovell, Mt. Vernon; Vice President, Walker Owens, Mt. Vernon; Secretary and Treasurer, Lee Chesnut, Mt. Vernon; Censors, W. E. Gravely, Broadhead, R. G. Webb, Livingston, R. H. Lewis, Wildie.

Meeting adjourned at 3 o'clock P. M., until next regular date, second Thursday in February, 1916.

LEE CHESNUT, Secretary.

Todd—The Todd County Medical Society met at Elkton, December 1st, 1915, for transaction of such business as might come before them. The house called to order by President C. M. Gower. Those present were, W. E. Bartlett, B. E. Bowen, T. W. Weathers, L. P. Trabue, R. L. Roll, J. L. Farmer, B. T. Esler, J. R. Crittenden, R. W. Frey. The seventh annual report of the Medico-Legal Committee was read and discussed at length. On motion of Dr. Weathers the Todd County Medical Society goes on record as favoring an All Time Health Officer. A committee composed of Drs. Weathers, Bartlett and Boone was appointed to draft said resolution and report same.

This being the regular annual business meeting the society proceeded to the election of officers

for the ensuing year, the following members were duly elected and installed:

President, W. S. Petrie, of Fairview; First Vice President, R. L. Boyd, of Allensville; Second Vice President, W. B. Jefferson, (Honorary Member), Elkton; Delegate to State Meeting, R. W. Frey, Trenton; Censor, Dr. B. E. Boone, Elkton; Secretary and Treasurer, L. P. Trabue, Elkton.

Essayists were appointed for the first six months' meetings. All appointed required to prepare papers and if not able to attend, papers must be sent in to be read by the Secretary. Elkton was selected as the place of meeting until other points are agreed upon. There being no further business the meeting adjourned to meet at Elkton the first Wednesday in January, 1916.

L. P. TRABUE, Secretary.

Wolfe—The Medical Society of Wolfe County met in the office of B. D. Cox, in Campton. Motion carried that S. S. Swango be made president pro tem and B. D. Cox, secretary.

Taylor Centers was then elected President of this society for the ensuing year, and B. D. Cox was duly elected secretary for the year 1916.

G. M. Center was duly elected Health Officer of Wolfe county for the ensuing year.

G. M. Center made a brief talk on "Abnormal Labor," and reported a case which was discussed by all present.

The meeting then adjourned to the first Monday in February.

B. D. COX, Secretary.

Whitley—The Whitley County Medical Society met on December 9, 1915. The minutes of the last meeting were read and approved.

C. A. Moss made a talk upon medico-legal subjects and read "The Seventh Annual Report of the Medico-Legal Committee," and also read extracts from "The Legal Status of the Physician and Surgeon," by Hon. Fred Foreht, Jr., published in the November Journal. Dr. Moss also added a few remarks on the golden rule.

The following officers were elected for the ensuing year:

President, A. A. Richardson; Vice President, J. D. Adkins; Secretary and Treasurer, C. A. Moss; Delegate, C. G. Ellison; Alternate, C. A. Moss; Board of Censors, J. H. Parker, M. W. Steele, A. A. Richardson.

C. A. Moss, C. G. Ellison, and A. A. Richardson were reelected upon program committee for ensuing year in reward for their strenuous services during the past year.

The following resolution was adopted and carried without a dissenting vote or voice.

We, the members of the Whitley County Medical Society earnestly request and insist that our State Senator, Hon. B. C. Lewis, and Representative, Hon. Chas. Bays, give their hearty sup-

port to all progressive medical legislation, especially the All-Time Health Officer Bill, and since we believe that they are deeply interested in the health and welfare of our people, it is true now that forty-seven per cent. of the deaths in Kentucky during the past year were due to preventable diseases, tuberculosis, typhoid fever and others. This strikingly demonstrates the need of an all-time health officer to educate the people and the doctors how to prevent the spread of disease and teach the laws of health, an all-time health officer is also needed to bring the people of Kentucky in closer touch with the State Laboratory so that all may get the benefit of the wonderful work being done by this laboratory, and in this manner disease will be detected early, cures effected before disease gains stronghold, and the spread of deadly diseases stopped.

It was further ordered that a copy of the above resolutions be sent the Hon. B. C. Lewis and the Hon. Chas. Bays at once. There being no further business the meeting then adjourned.

Those present were, C. G. Ellison, L. B. Croley, E. S. Moss, C. A. Moss, and A. A. Richardson.

C. A. MOSS, Secretary.

IN MEMORIAM

Dr. John Gaunt Brooks, born October 5th, 1840, died September 29th, 1915.

Dr. John G. Brooks was born in Montgomery County, Tennessee, October the 5th, 1840. He moved with his father to Ballard County, Kentucky, at an early age where he was reared on a farm.

When the Civil War began he enlisted as a private in the Confederate army, serving in Company D, Third Kentucky Volunteers under General Lloyd Tiplman for two years, afterwards serving with General Bedford Forrest. At the close of the war he returned home where he soon entered upon the study of medicine. He attended his first course of lectures at the University of Nashville, Tennessee, in 1866 and 1867, and graduated from the Jefferson Medical College, Philadelphia, in the Class of 1868. Dr. Brooks first located in Levelaceville, Kentucky, and formed a partnership with Dr. D. P. Juett until January, 1869, when he moved to Paducah, where he acted as City Physician in 1870-71. In 1872 Dr. Brooks received an appointment as physician to King Kala Kana in the Hawaiian Islands and remained there for two years, returning to Paducah in 1874, where in the following year he married Miss Mary King, a daughter of General John Q. King, a distinguished Kentuckian.

Dr Brooks was a charter member of the Southwestern Kentucky Medical Association, one of the most energetic and useful medical societies

in the South, and in 1887 he was honored by being elected to the Presidency of the Kentucky State Medical Society and was an active member until his death, September the 29th, 1915.

For the past four years Dr. Brooks had retired, having a competence and desiring to take a well earned rest. The last year of Dr. Brooks' life

BOOK REVIEWS

W. B. Saunders Company, Publishers of Philadelphia and London, have just issued their 1916 eighty-four page illustrated catalogue. As great care has evidently been taken in its production as in the manufacture of their books. It is a de-



J. G. Brooks M.D.

was made very sad by reason of the death of his dear companion and wife, Mary King Brooks.

There perhaps has been no physician in Kentucky who had a wider experience in medical and surgical work than Dr. Brooks. His friends were legion, and a volume could be written on his life and work and the impress of his sterling character will remain a precious legacy to his four sons and daughter as well as to his host of friends among the profession.

scriptive catalogue in the truest sense, telling you just what you will find in their books and showing you by specimen cuts, the type of illustrations used. It is really an index to modern medical literature, describing some 300 titles, including 45 new books and new editions not in former issues.

A postal sent to W. B. Saunders Company, Philadelphia, will bring you a copy. This catalogue is interesting to physicians as a ready reference index to modern medical literature.



AARON KOHN

Attorney of the State Board of Health for thirty years.

As a direct result of his work Kentucky is the only state which has no
advertising quack operating within its borders.

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EDITORIAL.

AN APPRECIATION OF MR. KOHN

In the death of Aaron Kohn the medical profession of Kentucky, and that portion of the afflicted people who suffered daily from the depredations of quackery a generation ago, as is still true in most of the other states to-day, lost one of their greatest and best lay friends. When the writer was made Secretary of the Board in 1883, Clarence U. McElroy, of Bowling Green, was selected as its legal advisor and, practically without compensation, and with distinguished ability and faithfulness, he is still serving in that capacity. When the first medical practice law was enacted in 1888, Louisville was the storm center of quackery and, extensively and blatantly advertised in both the city and country newspapers, and visiting all county seats and important towns monthly by appointment, representatives of so-called "Medical Institutes" and "Inter-National Hospitals" and "Infirmarys" preyed upon the credulous sick, and disgraced the medical profession, to an extent which those of the present generation can scarcely realize. With the fund arising from the small license fees from physicians, paid once in a lifetime, supplemented by contributions from a few public spirited physicians of Louisville, Mr. Kohn was employed to enforce this law, aided ably by Dr. W. H. Wathen, Medical Referee there, and, so far as the limited funds would permit, by a force of detectives and by local attorneys all over the State. It was a man's task but, with the remark that "No Jew ever employed a quack, or would protect men who robbed God's most unfortunate class—the sick poor,"—from that day until his untimely death, always for small compensation, and often for years at a time without any, he made the cause of the medical profession and the State Board of Health his own, and week after week and month after month, until the backbone of quackery was broken, as it had not up to that time been done in any other State, and they

had been driven from Kentucky, he could be found in the courts of Louisville, with Mr. McElroy and other attorneys before the Governor and Court of Appeals at Frankfort, and in the courts at Lexington, Paducah, Bowling Green and elsewhere, always ready, always confident and almost uniformly successful. With an almost phenomenal industry, ability, grasp, and power of mastery over any subject with which he had to deal, he had a delightful personality, was the soul of honor and one of the cleanest, noblest and most unselfish men it has ever been my good fortune to know.

"Peace to his ashes!" "We may never see his like again!"

J. N. McCORMACK.

THE ALL-TIME HEALTH OFFICERS BILL.

The "All-Time Health Officers Bill" has been withdrawn for the present session.

It was introduced early in the Senate by Senator Glenn, and in the House by Mr. Dowling. It was recommended for passage by the House Committee and placed in the Calendar. A few hours before the session of the Senate Committee to hear arguments for its approval, the sponsors of the bill were asked to await the result of a conference with the Governor.

Certain other measures had been introduced by the opposition which, if passed, would have placed the operation of Public Health Work under the "political spoils" system. This, of course, would have meant disaster and impotency. Included in this opposition program there were several measures designed to weaken, if not entirely destroy, our carefully built system of medical licensure which is more and more, as the years pass, protecting our people from incompetent doctors. This opposition to our health legislation, limited to three or four members of the Senate, made it plainly apparent to the Governor that they would embarrass the administration throughout the session in the passing of its measures, if our Health Officers Bill were permitted to be

pushed with the tacit approval of the Governor, who realized and expressed his belief in the merits of the bill. It was suggested by the Governor, and his suggestion necessarily, of course, was adopted, that action on the Health Officers Bill and all other bills framed by the opposition should be withdrawn for the present session.

A careful survey of the Senate and House led the backers of the Health Officers Bill to believe that, with the approval of the Governor, it would pass by large majorities. It showed, also, that with his disapproval it would hardly secure the necessary votes. The plans of the opposition to make a political machine of the Board, of course, would have failed, but after a winter of hard fighting the results could not be as favorable as under the present situation with the hope of approval of the administration for its reintroduction and favorable consideration in the next session.

The legislative committee desires to express its gratitude to the physicians, women's clubs, and the citizens of the State generally who have labored so untiringly for this measure. It is a matter of unfeigned regret to those conversant with the facts that several thousand valuable lives must be lost because of political exigencies which ought not to have any effect in such health and life-saving work.

A SUGGESTION.

Dr. Kobert, the Secretary of the Marion County Medical Society secured enough neat calendars from one of his insurance agent friends and marked the date of the monthly meetings of the County Society with a blue pencil on each month's calendar, to be presented to each doctor so they could be hung conveniently in his office to be a daily reminder of the meetings. In addition to this Dr. Kobert sends his members a program each month. This looks like a splendid practical suggestion.

MALARIA.

Dr. von Ezdorf of the United States Public Health Service writes that the physicians of Kentucky reported to him 742 cases of malaria in July, 906 in August, and 1,102 in September. This makes a total of 2,750 cases of this disease. It is a matter of sincere regret that only 540 of the 3,500 physicians to whom the cards were mailed, replied. It is so easy for our physicians to make these statistics of value that it seems a pity that all of them do not do so. The replies received indicate that there is much more malaria than we had expected to find and it is important for our health officials and others to take an active interest in its cure and prevention.

AMERICAN FIRST AID CONFERENCE.

At the request of the American First Aid Conference, President Wilson has appointed a National Board of First Aid Standardization to deliberate carefully on first aid methods, packages and equipment and instructions, and to recommend a standard for efficiency to a subsequent session of the Conference. Dr. Richard H. Harte of Philadelphia is the chairman and the other members are Drs. Rucker of the Public Health Service; Patterson and La Garde of the United States Army; Fauntleroy of the Navy; and Dr. Horsley of Richmond, Va., representing the American Medical Association. Drs. Kaster of Topeka, Kans., and Plummer of Chicago, representing the Association of Railroad Surgeons.

This Board feels that it is necessary, in order to attain the objects for which it was created, for it to consult the best opinions of the country on the problems involved and to do this, they are especially anxious to enlist the sympathy and active cooperation of medical societies and the medical profession generally.

President Kincaid has appointed as the First Aid Committee for Kentucky Dr. A. O. Sisk of Earlington, Dr. D. Y. Roberts of Louisville and Dr. B. E. Giannini of Straight Creek. A great many of our members are interested in the problems to be presented to this Board and it is suggested that they correspond with the Committee or directly with Dr. J. C. Bloodgood of Baltimore, who is secretary of the First Aid Conference.

Foreign Bodies in the Stomach—D. C. Balfour Rochester, Minn. (Journal A. M. A., Feb. 5, 1916), reports the case of an insane woman who apparently had a penchant for swallowing teaspoons. Her habit was discovered by the nurse, who caught her in the act. A roentgenogram revealed their presence in the stomach, where they seemed to cause no special inconvenience or interruption to health. A gastrotomy, however, was considered advisable and seven teaspoons, instead of the supposed three or four, were taken out of the stomach where they had been arranged spoon fashion. The stomach was large and somewhat ptotic and its mucous membrane was somewhat thickened, but not evidence of injury was found. The spoons, which were of plated Utah metal, were somewhat larger than ordinary teaspoons and showed no erosion. The patient made an uneventful recovery.

SCIENTIFIC EDITORIALS.**WHAT DETERMINES MALIGNANCY IN EPITHELIOMAS.**

What determines malignancy in epithelial tumors? Are all tumors in which there is a hyperplasia of epithelial cells potentially malignant and on what shall a prognosis of probable metastases be based?

There is a large division of dermatoses characterized by the piling up of cornified and partly cornified squamous cells of the uppermost layers. Many of these show no tendency of the deeper layers to proliferate and invade the corium, no metastases occur, and there is no cachexia or danger to life; these are definitely non-malignant. Yet there is nothing else but this keratosis visible in an early stage of many other conditions, known as precancerous conditions, in which there is a latent tendency to malignancy which is apt to manifest itself at any time. An arrangement of cornifying cells in concentric cell-nests can not be the determinant factor, since these cell-nests are found as numerous in certain individual cases of leukoplakia buccalis, acanthosis nigricans and naevi which disappear entirely or remain non-malignant as in other cases which afterward become frankly and unmistakably malignant. So it would seem that there were something more necessary for a diagnosis of malignancy than the mere finding of piled up corneal cells, with or without the concentric epithelial cellular arrangement. Is it that these cornified cells come from deeper layers whose proliferation determines the malignancy? There is a theory that any stratum of cells may proliferate independently of the other layers below and above it; if it is the basal layer which is proliferating the result is a rodent ulcer or basal cell cancer; if the prickle cells immediately above the basal layer an epithelioma similar to the rodent ulcer, but differing from it in having cell nests; if still higher in the prickle cell layers an epithelioma rich in cell nests and quite distinguishable from the rodent ulcer type; if among the uppermost prickle cell layers an epithelioma in which the malignant features are absent, such as the benign papillomas. If this be true proliferation of the stratum granulosum which lies above all the prickle cell layers should not be malignant; and as a matter of fact more or less proliferation of the cells of the stratum granulosum occurs in many non-malignant conditions, such as verruca vulgaris, lichen ruber planus, psorospermiosis follicularis vegetans, and especially in lichen ruber verrucosus and condyloma acuminatum. But what then shall we say of tumors arising from the epithelial cells which have become differentiated into appendages of the skin, such as the cells

of the hair follicles and sweat and oil glands? These tricho-epitheliomata, syringo-epitheliomata and sebaceous adenomata are mostly benign, though they sometimes have a tendency to recur. Is this absence of malignancy due to the fact that they arise from epithelial cells whose origin corresponds to the upper layers in the skin? Or is it due to the fact that they are specialized cells and have lost their embryonic character? If the latter we should expect that the highly specialized cells of other glands would have little tendency to form malignant tumors, but this is not true. Quite the opposite.

Moreover we should remember that the cells of the stratum corneum, stratum lucidum, and stratum granulosum do not arise in these strata, but are formed by indirect division of the Malpighian cells in the rete whence they are pushed up to form one after the other of the upper strata, so that a cell, originally a prickle cell, acquires kerato-hyalin granules and becomes a member first of the stratum granulosum, then of the stratum lucidum, and finally, flattened out more and more and showing less and less nuclear outline, becomes a corneal cell. Cells of the basal layer may not become prickle cells, but prickle cells almost certainly do become corneal cells, nor is there any reason to believe that this is confined to upper layers and not true of the deeper layers. If prickle cells once lying next the basal cells may change their position until they are thrown off as corneal cells, how can we believe there is a differentiation of tumors formed by the deeper prickle-cells from those formed by more superficial prickle cells?

Again, if we see a section of an epithelioma in which the lymphatics deep in the corium are crowded with epithelial cells we are safe in assuring that soon metastases will occur elsewhere. But how shall we determine at an early stage before the lymphatics are invaded whether there will be this invasion later and how rapid and severe it will be? Even in tissue poorly supplied with lymphatics metastases may occur, while in tissue rich in lymphatics there may be none. What then determines the tendency to metastasize of epithelial tumors? On what features in sections taken from epitheliomas at an early stage shall we base our prognosis as to metastases? The benign papilloma has no absolute line dividing it from the early stages of malignant forms. Why do the cells in one retain their prickles and remain "good cells" and in the other lose their former characteristics as they proliferate more rapidly and more widely? It has been suggested that epithelial proliferation, or at least the power of these epithelial cells to invade the corium, enter lymphatics and metastasize elsewhere is

not due to the epithelial cells, but to the connective tissue of the corium. In other words there is a loss of power on the part of the connective tissue to restrain the epithelial cells; the balance between the epithelial tendency toward overgrowth and the connective tissue cell restraint of epithelial growth is lost. Where this alone is the case epithelial proliferation without invasion, such as is met with in benign epitheliomas, occurs. Usually, however, this loss by the connective tissue cells of restraint of epithelial growth is accompanied by a loss of resistance to invasion, in which case invasion and metastases accompany the epithelial proliferation and malignancy is the result. On the other hand it may be that certain parasites cause epithelial proliferation; different forms may produce proliferation alone or proliferation plus invasion.

However, whichever of these theories be true, until we can recognize this change in the connective tissue cells or identify the different parasites we are no further in our search for diagnostic and prognostic bases. For the present we must conclude that there is no absolute criterion on which to base a prognosis of future benignancy or malignancy. It is still more a matter of difference of quantity or of degree than of the absolute presence or absence of proliferation, cell-nests, prickles, karyokinetic figures, etc.

M. L. RAVITCH,
S. A. STEINBERG.

ORGANOTHERAPY.

The potentiality of organotherapy has been recognized so long that this form of therapeutics may be said to have seen light at the dawn of medicine. While for centuries the only reason to which it could lay claim for its right of existence was empiricism, it lived to finally be considered from a scientific basis and since the beginning of work along this line, it has so increasingly imposed itself as an important factor in scientific medicine that it now occupies a place among the most fertile fields for modern thought.

The organotherapy of to-day is difficult to define. It at first merely consisted in an attempt to supplement the function of any organ by administering the same organ from an animal. Now only the organs which are believed to form an internal secretion capable of influencing the physiological processes are considered in connection with this form of therapeutics but with the term limited to the cases where only the organs of internal secretion are involved, the conception may then be narrowed by excluding active principles such as pituitrin, which may be given as an ordinary drug or it may be broadened by excluding drugs which have a specific effect up-

on the organs of internal secretion. The administration of the external secretions and such substances as brain and nerve tissues strictly speaking is organotherapy but they produce their effect in a different manner from the internal secretions and will not be considered in this connection.

For practical purposes organotherapy as the term ordinarily implies may be defined as the therapeutic utilization of internal secretions for the purpose of correcting a perverted physiological condition brought about by an abnormal absence or deficiency of these substances.

Whether these internal secretions produce their effect by neutralizing or destroying toxic metabolic substances or by increasing certain phases of metabolism or whatever their effect may be and whether it is brought about by a sensitization of the organic phosphorus in the tissues or by some other means, is still a question, however, it is a known fact that there are organs which produce an internal secretion and that this secretion which when procured in an active state can be used to substitute the function of an impaired organ.

According to the present day conception this form of therapeutics is not employed primarily with the expectation of producing any curative effect upon the diseased organ itself but for the purpose of correcting the physiological derangement of other organs whose activities have been influenced through the lack of a normal amount of internal secretion and in no case should it be employed where the organ under consideration is already in a state of hypersecretory activity, for example, thyroid extract should never be given in a case of hyperthyroidism.

The administration of these organic preparations like that of any other class of remedial agents, is attended by its share of failures and disappointments but when a specific diagnosis can be made and they are selected and administered with due regard to the indications to be met, the successes will well be worth the effort.

There have been quite a large number of products from the various organs which are supposed to have an internal secretion placed upon the market but so far, only a few have proved themselves capable of holding up the standard of therapeutic exactness to which organotherapy is justly entitled.

The only practical way of considering these agents is by the organs from which they are derived.

THYROID ORGANOTHERAPY.

In all conditions which are due primarily to a deficiency of internal secretion from the thyroid gland, the administration of thyroid in some form which will furnish the required

amount of internal secretion will be followed by good results unless irreparable secondary effects have resulted. The most brilliant results from thyroid therapy occur in cases of cretinism and myxedema, here, improvement both mental and physical begins immediately and continues in many cases until the patient will apparently have reached the normal. In addition to the above conditions which are clearly due to thyroid deficiency, there are other less characteristic disturbances such as anemia, nervousness, undue mental and physical fatigue, obesity, menstrual disorders, rheumatoid affections and dryness and pigmentation of the skin which are occasionally due to thyroid insufficiency and the diagnosis of which will become clear with improvement following thyroid therapy.

PARATHYROID ORGANOTHERAPY.

The field of usefulness of parathyroid organotherapy is, as far as known at present, limited to parathyroid tetany resulting from removal or disease of the parathyroid glands and here the results have not been uniform, some patients giving no appreciable response to the treatment while others begin to improve immediately, however, it is improbable that a cure ever results where the parathyroid function is completely abolished but where some of the glandular tissue remains, it may act as a palliative until functional recovery of the remaining part takes place.

SUPRARENAL ORGANOTHERAPY.

Suprarenal therapy in conditions resulting from suprarenal insufficiency has met with varied results. Its prime indication is in Addison's disease. In some of these cases it gives excellent results which more than likely, are in part due to a compensation by adrenal tissue which has remained undestroyed but when unaided is incapable of furnishing enough secretion to meet the physiological demands, in other cases it has no effect whatever upon the progress of the disease. The general muscular, nervous and cardiac weakness which follows the exhausting diseases will often rapidly improve under suprarenal therapy.

PITUITARY ORGANOTHERAPY.

That the anterior lobe of the hypophysis plays an important part in the normal physiological processes is undoubted and there has been a great deal of experimental work done in an effort to use this portion of the gland to correct abnormal conditions which have been attributed to an impairment of function of this part of the gland but so far, it seems that nothing tangible has been accomplished. The posterior lobe furnishes the familiar extract,

pituin but its use differs in no material way from that of any other drug.

OVARIAN ORGANOTHERAPY.

The ovarian preparations are often very efficient in the treatment of disturbances occurring at the menopause either the physiological menopause occurring at the regular time in life but accompanied by exaggerated nervous phenomena or that type which occurs prematurely from removal or disease of the ovaries, however, it is more serviceable in the latter type. Such symptoms as insomnia, headache, palpitation and flushes will frequently begin to improve after the beginning of this treatment and continue until they are relieved and where the cause is artificial the menstrual flow will usually become increased. In addition to relieving these disturbances the treatment will also substitute that part of the ovarian function which has to do with the activity of the other organs of generation and the maintaining of the sexual characteristics in general.

ORCHITIC ORGANOTHERAPY.

It can't be said that any definite and reliable conclusions relative to the therapeutic value of testicular preparations have been reached. While it has been proved conclusively that the testicle performs a function other than the genital, attempts to utilize these preparations have met with such a limited degree of success that, they can't be considered as dependable.

E. W. JACKSON.

Plastic Operations on the Face.—J. S. Horsley, Richmond, Va., (Journal A. M. A., Feb. 5, 1916), says that plastic operations on the face are not usually life-saving, but curing facial deformity relieves the patient mentally and physically. Plastic operations require probably more skill than any other kind of surgery, and they especially require ingenuity to meet special conditions and make things fit. General considerations such as age and health of the patient must be given due weight. The age is of great importance, as flaps can be transplanted with a smaller amount of nourishment in the young than in the old. As to dressing, dusting the wound with boric acid powder and leaving it open is all that is necessary. If there is much oozing, a compress of dry gauze may be kept on for a few hours. If any of the facial cavities are involved, hexamethylenamin is given before and after operation to sterilize the secretions. While there are general principles in this work, each case is a law to itself and the greater part of his article is given to the methods which he has found necessary to employ in special cases, too detailed to be thoroughly abstracted. Deformities of the forehead, eyelids, nose, septum, etc., are described.

ORIGINAL ARTICLES

INTUSSUSCEPTION IN INFANTS.*

By LEWIS S. McMURTRY, Louisville.

Intussusception is essentially an accident of infancy, since three-fourths of the cases obtain in children under two years of age. In a series of three hundred (300) cases collected by Grisel, two hundred and four (204), that is 68 per cent. occurred in breast-fed infants under one year of age. Universal clinical experience confirms these observations, showing that intestinal invagination is an affection of the first period of childhood and particularly is observed in breast-fed infants. Another fact equally well established is that this accident occurs most frequently in vigorous children, and consequently is more common in males than in females.

Of all the varieties of intestinal invagination the ileo-cecal is by far the most common, and almost invariably is found in cases of infants and young children. Grisel concludes that in infancy 82 per cent. at least are of this variety. The anatomical explanation of this fact doubtless is that the normal ileo-cecal junction is in the form of an invagination. In infants the cecum is provided with a long mesentery, permitting wide excursions of that viscus; with advancing age the cecum becomes more and more fixed to the posterior abdominal wall, while the small bowel retains its mesentery and consequently its extensive mobility.

The intensity of reflex action is very great in infancy and childhood. Intestinal irritation and muscular spasm beget contraction of the bowel and peristaltic contracture, aided by straining, drives the contracted bowel into the segment below. The mechanism is the same as that by which a portion of intestine forces its way into a hernial sac. A moment's consideration of the anatomical relations of the ileum and cecum at the point of junction will show how readily the smaller tube may be telescoped into the larger tube as a receptacle. The mesentery is carried in with the attached segment of invaginated bowel, increasing its bulk and adding to the obstruction, forming a vascular and constricted pedicle; venous congestion begets swelling and bleeding, and later follows arterial constriction and gangrene. Under continued peristalsis aided by straining and invaginated bowel may involve the entire colon and present at the rectum. The tumor of intussusception consists of a mass of invaginated ileum, cecum, colon and mesentery, varying

in size with the extent to which the entering segment has advanced in the lumen of the colon. The functional result of this departure from normal anatomical relations is partial or complete obstruction. The mobility of the intussusception is in proportion to the length of the mesentery, and rotating on this as an axis may be carried into the pelvis, up beneath the liver, or to the opposite side of the abdomen.

The onset of this affection is marked by sudden, violent, acute pain. As already stated, the child is usually vigorous and breast-fed, with good digestion and corresponding disposition: perhaps while asleep it is awakened by pain and cries piteously. The pain continues with increasing severity, and the face becomes pale and features pinched. The temperature is low, perhaps subnormal, and vomiting occurs. These symptoms are coincident with the accident. The vomit consists at first of recently ingested food, later of bile; it rarely becomes feculent. Vomiting is due to pain and shock, and the arrest of the fecal current. Usually the vomiting is intermittent, ceasing for an hour or two and then returning. This symptom is rarely absent and is aggravated by food and medicines, especially laxatives which are so frequently given in the initial stage of the disease.

After a few hours the symptoms may spontaneously abate and reaction take place. This is due to oedema and does not indicate release of the invaginated bowel. This temporary relief from pain and shock often proves fatal by obscuring the diagnosis.

Obstruction is not an early symptom of intussusception; it comes on secondarily. Hence at first the child expels gas and fecal matter, but very soon—within a few hours—blood and mucus appear in the stools. Blood and mucus exude from the mucous surface of the invaginated intestine, and pass from the bowel. After the first few stools the discharges from the bowel consist altogether of bloody mucus. As a rule the child will cry and strain and this characteristic bloody stool will be expelled. This symptom is almost pathognomonic. When a healthy infant cries with sudden violent abdominal pain, exhibits the symptoms of shock, vomits, and has frequent stools of blood and mucus, a diagnosis of intussusception, even though no tumor may be found, is practically justified.

As the oedema of the invaginated intestine increases the obstruction becomes complete, and as a rule the abdomen becomes tympanitic. If the obstruction is not relieved the patient will succumb to exhaustion and the toxæmia resulting from the devitalized intestine. The duration of the disease if left to nature is from two to seven days. In very rare in-

*Read before the Southern Surgical and Gynecological Association, December 15, 1915.

stanes, spontaneous sloughing and expulsion of the intussusception, with recovery, have occurred, but this is an exceptional termination of this affection. It may be laid down as practically an established fact that if an invaginated intestine in infancy is not released within twenty-four hours, the child will die. Exceptions to this will be few and infrequent.

The diagnosis of intestinal invagination during the first year of life can usually be readily established by the observance of the symptoms described. The sudden onset of violent pain, with shock, vomiting, bloody stools and perhaps a movable tumor, are as a rule sufficient. The tumor is a variable symptom. In sixteen cases reported by Eliot a tumor was found in ten cases; in six cases reported no tumor could be felt. While the tumor is most frequently found in the right iliac fossa, it may follow the course of the large intestine and be found under the liver, or may reach the left side of the abdomen and be palpated by the finger in the rectum. In all cases, a rectal examination should be made. The bloody mucus which soils the examining finger is significant. It has been suggested that a roentgenogram of the intestine after an injection of bismuth be made, and this procedure has been utilized as a diagnostic aid. Such investigation should be made in every case when practicable, and will often establish a positive diagnosis in doubtful cases.

The most frequent error in diagnosis is to take the beginning of invagination for an attack of entero-colitis. The sudden onset of pain, the frequent bloody stools so characteristic, and without the profuse diarrhea of entero-colitis, together with the rapid alteration of the patient's condition, should suffice to make the distinction.

This condition might readily be confused with acute appendicitis. The tumor of invagination is usually sausage-shaped and mobile; while in appendicitis the swelling is diffuse and immovable. Moreover appendicitis is marked in the beginning by fever; this does not obtain in intussusception.

In dealing with a case of suspected intussusception in a baby the physician should, if possible, decide the diagnosis before leaving the house. He should study the case closely, give it immediate attention and weigh each symptom carefully. The fate of the patient depends on early diagnosis.

The excessively high mortality following the treatment of intestinal invagination in infants, even in the most skilled hands, invites attention to this subject and has impelled the writer to offer this paper. One cannot but be impressed with the analogy between intussus-

ception and strangulated hernia; indeed intussusception is of itself a hernia. The infant at the breast is a very uncertain quantity in surgery, and moreover the fact that the hernia involves visceral structures exclusively, and is wholly within the abdomen, conduce to a more mortal condition than a superficial hernia.

Cathartics and opium for obvious reasons have no place in the treatment of intussusception. Attempts at reduction by means of distention either with gas or fluids, with inversion of the patient, bear the same relation to this lesion as taxis in strangulated hernia.

In all cases in which the diagnosis is made within a few hours after the telescoping has occurred immediate operation should be done. In that very large proportion of cases in which the surgeon is not called until twenty-four hours have elapsed since the invagination occurred, swelling has taken place to such an extent that very seldom will distention by air or water succeed. There is reliable testimony that in some instances it has succeeded, and hence it should be given a trial in all cases where the disease has advanced beyond the period of operative treatment. The patient should preferably be anesthetized and the body inverted, while by the aid of a soft rubber catheter and funnel placed above the patient warm saline solution is introduced into the bowel. Gentle palpation along the course of the colon should be applied by the surgeon while the water flows into the bowel. Unless the diagnosis was erroneous, this treatment did succeed in case No. 4, in the appendix to this article.

When abdominal section is done, success will depend more upon the operator's expedition and skill, with refinement of manipulation, than in perhaps any other abdominal operation. The young infant is easily shocked. It is very important that the invagination should be reduced by pressure from the apex of the intussusception so that it is *pushed out from within* instead of being pulled out. The appendix should not be removed unless absolutely necessary, and every effort made to abbreviate the operative procedure. In my own experience I have found chloroform preferable for anesthesia.

It is well known that after release of the invaginated intestine there is a tendency for recurrence of the invagination. To prevent this several operative procedures have been utilized. One is to shorten the mesentery by securing it in a position parallel to the intestine. Eliot adopted the method of attaching the disinvaginated intestine to the parietal peritoneum by a few sutures of catgut. This last method proved satisfactory in his cases. Every addition to the operation that is not

absolutely necessary should be omitted, and every moment of time should be conserved in the patient's interest. Even with the best judgment and skill, the mortality of the operation done the first twenty-four hours stands at 40 per cent.

When an irreducible invagination is found, the best procedure perhaps is to establish an artificial opening in the intestine and wait to a later date for the resection of the invaginated bowel. There is, however, but little choice between this and resection of the intestine at the time, since both procedures are followed by an extremely high mortality. Special methods of resection have been devised by Maunsell, Barker, and others, but unfortunately all methods of resection have yielded poor results. Indeed a resection of the invaginated intestine in infancy is almost invariably fatal.

I append herewith four illustrative cases of intussusception in infants under one year of age. Two late cases were not operated upon and both died. One was recognized early, operation done and recovered; another came late, and unless there is an error of diagnosis, recovered without operation.

Case I.—Helm S., male, aged eleven months. Seen with Dr. Sidney J. Meyers. The patient, a vigorous breast-fed child, had been well until three days before, when seized with acute abdominal pain, and shortly afterward had repeated attacks of vomiting. In the evening of the day of attack the child strained and passed blood and mucus from the bowel. This child had suffered with diarrhoea some months before, and at first this attack was regarded as a renewal of the previous illness. On the following two days the vomiting was repeated and the mucus and bloody stools persisted, and the child was prostrated and was growing weaker. On examination at my first visit, the temperature was 101, pulse 160, respiration 34. The abdomen was prominent and slightly distended, and an oblong tumor, somewhat tender, was felt above and to the right of the umbilicus. Castor oil had been given and was rejected by the stomach, after which small doses of calomel were administered. No fecal matter or gas had passed for twenty-four hours, and the bloody stools were frequent. Rectal injections of warm salt solution had been given without benefit. The condition was too extreme to urge operation, to which the parents were much opposed, and death occurred the following day.

Case II.—May C., aged nine months, was brought by her parents to the Gray Street Infirmary in the early morning. The patient was a healthy well-nourished child, female, and the mother stated that she had been seized in the night with severe abdominal pain, fol-

lowed soon afterward by vomiting. She had had several fecal movements, and cried almost constantly from pain. The features were pinched and the child was very ill. A distinct tumor about the size of an egg was felt on the right side slightly below the umbilical line. The temperature was normal, pulse 132. Upon making a rectal examination blood followed the withdrawal of the finger from the rectum.

Operation nine hours after the onset of the attack. Chloroform anesthesia. Under anesthesia the tumor was well defined, and the incision was made in the right semi-lunar line. The peritoneum contained very little fluid. The intussusception was of the ileo-cecal variety, the apex being well advanced in the ascending colon. The reduction was readily accomplished by expression, aided by slight traction at the last. The abdomen was closed without drainage. Duration of operation about twenty minutes.

There was one bloody stool after the operation, and vomiting occurred twice, but the pulse was reduced almost to normal in a few hours, and the pain was relieved. On the day following operation there were several rather offensive stools, but free from blood and mucus. On this day the temperature was 102, but fell to normal the next day and remained so throughout. The convalescence was rapid from this time and recovery complete. The child nursed from the mother throughout the whole time. The healing was by primary union.

Case III.—Henry C., aged ten months, from Tell City, Indiana, seen with Dr. P. F. Barbour. The patient was a vigorous child, breast-fed, and had been well until three days prior to coming to Louisville. The attack had come on suddenly in the early morning with violent abdominal pain, followed by vomiting. Bloody stools were observed on the second day, and complete obstruction followed. On examination the abdomen was distended, and a sausage-shaped tumor could be distinctly felt on the left side above the umbilical line. The child was very ill and suffered almost constant pain. The temperature was 102, the pulse rapid. Bloody stools were frequent.

The unpromising nature of operation under existing conditions was explained to the parents, and they refused it. Death occurred on the sixth day of the attack.

Case IV.—H. S., male, aged seven months, was brought by his parents from their home near Hanover, Indiana, to Dr. William Jenkins in Louisville, on October 11th of this year. The patient is a strong, healthy child, nursing his mother, and had never been ill. On the eighth instant, three and a half days

before, he was seized suddenly with acute abdominal pain, followed in a few hours by vomiting. He was seen at once by the family physician, who administered a dose of castor oil, presuming the trouble to be indigestion. The vomiting persisted and features were pinched, the face pale, and on the following day blood and mucus were discharged from the bowels. The family doctor made a diagnosis of intussusception and on the third day brought the patient to Dr. Jenkins for consultation. Dr. Jenkins confirmed the diagnosis and called me for consultation.

On examination the child appeared very ill. The temperature 101, pulse very rapid, pallor, vomiting, bloody stools and frequent paroxysms of pain completed the typical array of symptoms characterizing intussusception. The abdomen was considerably distended, and no gas or fecal matter had passed from the bowels for thirty-six hours. He was placed in Norton Memorial Infirmary at once. The child's condition seemed so extreme that I did not urge operation. He refused to nurse, and when urged to do so the milk was rejected by the stomach. Twice daily warm salt solution was slowly injected into the bowel by means of a soft rubber catheter, tube and funnel, the patient being held in the mother's lap during the time almost in the inverted position. Neither fecal matter nor gas came away as the water was expelled or otherwise. The small stools of blood and mucus persisted.

On the third day after admission to the Infirmary, and the sixth day of the illness, about two hours after receiving an enema, a small fecal stool with gas passed, to be followed in two hours by a copious fecal evacuation.

Relief from pain was immediate; the child nursed with avidity, and from this time improvement was rapid. He returned home on the fifth day after admission to the Infirmary and quickly regained perfect health.

The classic symptoms of intussusception were presented by this patient, and if the diagnosis was correct the case is almost unique in the clinical history of this very fatal disease.

Test for Urobilin in Urine and Stool.—Edelmann's test is a modification of Schmidt's test for feces, which is based on the red pigment formed when dissolved feces are treated with a concentrated aqueous solution of mercuric chlorid. By using an alcoholic solution, he states, the reaction is much more pronounced. One of the two reagents is a 10 per cent. alcohol solution of mercuric chlorid. The other reagent is a 10 per cent. alcoholic solution of zinc chlorid and amyl alcohol. Only one or two minutes are required for the test, and its simplicity adapts it, he reiterates, for bedside use.

FRACTURES.*

By JOHN B. MURPHY, Chicago, Ill.

PRESIDENT KINCAID: Dr. Murphy is a life honorary member of our Association, and I esteem it a great honor, as you all must do, to have him with us to-day. Dr. Murphy was first brought to our attention by the use of the anastomotic button which bears his name, but his field of activity in the surgical world has been so general that he has not failed to touch us at every angle, and his work has evoked from the master surgeons of the world and of this country the very highest encomiums. Dr. Mayo has said that Dr. Murphy is the greatest clinical surgical teacher in the world; and Dr. Welch has well said that he is the broadest-thinking man medically in the profession to-day. Gentlemen, I present to you Dr. John B. Murphy, who will now address you on the subject of fractures. (Applause).

JOHN B. MURPHY: *Mr. President and Member of the Kentucky State Medical Association:*

I feel very much embarrassed by this introduction. I am happy to be an honorary member of this Association. I regretted to-day exceedingly that I was not an active member as I desired to rise and unite with the members in extending a vote of thanks to the learned attorney for the able way in which he presented his subject. He made some reference to what is known as the Murphy treatment. The Murphy treatment and Smith's treatment and Brown's treatment as applied to cases simply means that it is a method to be applied to individual cases, but applied with brains. (Applause.) The learned gentleman did not make it clear why the patient had an infection in the ankle-joint following a sprain, whether she had a coexisting infection in the upper air passages or whether it was associated with or without a fracture in that particular case. I think it can well be said of the law, that it is always looking for precedent, i.e. looking backward. I am happy that it can be said of the profession of medicine that it is always looking forward and upward. (Applause).

I feel complimented in being asked to speak to you to-day, and in discussing the subject with the secretary as to what I should talk about, it was concluded that I should take up the dry subject of fractures. It seems to me, inasmuch as so much has been said and written about fractures, there is practically nothing new to mention, nothing remains to be said, but when we note the results of treat-

*Read before the Kentucky State Medical Association, Louisville, September 21-23, 1915.



Fig. 1.



Fig. 3.



Fig. 2.



Fig. 4.

ment that are brought before us day after day, one comes to this conclusion, that definite and exact methods have not been standardized, have not been made common; therefore, in our talk to-day we shall speak on the subject of fractures from the standpoint of the practitioner, rather than from the viewpoint of the operating surgeon.

How in our everyday work can we handle fractures to better advantage? What are the essential principles that should be recognized as standard in the communities in which we live, in order that litigation may be avoided?

In considering the subject of fractures, it seems to me it is advisable, first, to go over a few of the essential factors in connection with the management of fractures, namely, (a) fractures in the shaft, and (b) fractures at the extremities of bones. What difference should it make whether a bone is broken near the end or broken at the shaft as far as the histology of repair is concerned? It makes a great difference, and the results in the two positions will be different if the fracture are handled on the same lines.

In fractures of the shaft of long bones, for instance of the humerus or femur, it is important, in order to stimulate union, that a certain amount of mobility obtains. That looks like a radical deviation from our former belief, but it is not so radical as it would seem. From thirty-five to twenty-five and nearly down to twenty years ago, the treatment of fractures in the shafts of long bones, for instance of the femur, was to place them in a straight splint or a fracture box, with or without extension, admitting of considerable mobility at the point of fracture; following that plan we rarely ever had a non-union. During my service in the Cook County Hospital of Chicago, in 1879, when Chicago was a rapidly growing city, we had one case of non-union of a fracture in a service of twenty months, which shows what a rare condition it must have been. To-day non-unions are common, they are superlatively common, particularly non-unions in shafts. If a fracture is immobilized absolutely, there is but little or slow regenerative reaction at the point of fracture. It is essential therefore to have a certain amount of motion, and with the advent of the cast, the nail, the screw and the Lane plate, the number of non-unions has been gradually increasing. As so well recognized was this by the able Lane that when he encountered a case of non-union as the result of any type of treatment he advised against the use of his plate as a means of treatment. Other surgeons are using the plates in this relationship, contrary to the master's teaching. Furthermore, in fractures of the shaft, it is essential that certain traumatic stimulation be permit-

ted through limited motion, because it stimulates the formation of callus.

Why, then, should not the same method of treatment apply to fractures at the extremities of bone, namely in the joints, non-union practically never occurs at the extremities of the bone, except when the fracture is in two places, in the condyles of the humerus and in the neck of the femur. Non-union does not occur where there is much cancellated tissue, with one exception and that is the neck of the femur, because there is no cancellated tissue in the neck or the condyles of the humerus. In that part there is only compact bony tissue, and no cancellated tissue. If one has a fracture near a joint, and motion is permitted or passive motion is introduced before repair of the soft parts or of the periosteum has taken place, the amount of callus is increased which is disastrous to the subsequent motion in the joint. One need have no fear of non-union when the fracture is near a joint, except in the two positions mentioned. Therefore, immobilization to the superlative degree is desirable, because it lessens the deposit of callus.

How does callus form, particularly in fractures near joints? In looking over the recent experiments and X-rays in the last editions on experimental surgery, let us see how callus is deposited, following a simple fracture; for instance, in a transverse fracture of the lower end of the humerus one inch above the condyles with a backward luxation of the lower fragment and a forward luxation of the lower end of the upper fragment. See Figs. 1, 2, 3 and 4. You will note from the pictures that the periosteum has been torn free from the posterior surface of the humerus upward a distance of two inches. You will further note that new bone has filled in the v-shaped, wedge-shaped space between the periosteum and the lower end of the upper fragment and the upper end of the lower fragment. It will be noted that from point A to B and then to C, that that triangular zone is filled with new-formed subperiosteal callus. You will note further that practically no new bone has formed on the anterior margin of the lower end of the upper fragment to fill in the space between the lower end of the upper fragment and the coronoid process (D). The reason no bone has formed there is because no periosteum could be torn off from the anterior portion of the lower fragment, as it was too close to the joint or the cartilaginous attachment of the periosteum. In addition to that, you will note that callus has formed between the upper end of the lower fragment and the posterior fractured margin of the upper fragment. If in treating a fracture of the elbow, you should commence pas-

sive motion on the sixth to the tenth day and tear these freshened bony ends apart every second or third day, what would necessarily follow? (a) Hemorrhage with each fresh laceration; (b) infiltration of the clot with new capillaries and a formation of connective tissue, and finally, (c) ossification of the connective tissue callus, namely the production of a large mass of bone as shown in Fig. 5.



Fig. 5.

You lessen thereby the possibility of subsequent free motion in the joint.

Those are the two elements concerning differences in the management between fractures of the shaft and fractures near the bone ends, namely, in shaft fractures, a degree of mobility is essential, because it increases the callus, while in joint fractures, absolute immobilization is desirable, because it lessens the quantity of callus.

Next, how should we manage compound fractures? There is a well-established law, based on the overwhelming number of evil results, that a compound fracture should never be managed by the introduction of a foreign body of any kind, whether it be a nail, a screw, a plate or a transplant. It makes no difference what it is. In the management of compound fractures, one can hope for an aseptic healing of the fracture with a fair reduction of deformity by exercising ordinary aseptic care, preparing the skin of the entire neighborhood with tincture of iodine, without washing or scrubbing the tissues; by cutting out the lacerated skin edges and cutting off the protruding and soiled bone ends with a bone scissors or a bone-cutting forceps; and by then adjusting the fragments to each other (as in Fig. 6-A, before operation; Fig. 6-B, after operation), and closing the wound with a horsehair suture and without drainage. One must never put a finger, gloved or otherwise, into the wound. One must never touch any part of the freshened wound surface

with a part of the instrument that has contacted with the hands; in other words, if he makes a reduction with a non-hand-touching instrumentation, inflicting the least trauma in the field, and never inserts a foreign body of any kind to remain



Fig. 6-A—Before Operation.

in the field to aid in securing a bony apposition, one can attain in a large percentage of compound fractures an aseptic healing. *If one does not keep his hands and instruments out of the wound, he cannot expect to have any degree of hope of having it remain aseptic.* If the wound is enlarged and a Lane plate or a Murphy nail is put in, or a hand is put in in the attempt to feel around and see how badly the bone is comminuted, the result is fairly sure to be a bad one. I would urge that every instrument of every kind be kept out of the wound; reduce the protruding bone, if possible, and endeavor to convert the compound fracture into a simple fracture.

When that is done, it is a very common thing to have the bone heal as a simple fracture.

In the next place, when one has a compound fracture near a joint, it is doubly important that one should keep out those things which tend to infection, because if the bone becomes infected or if the joint becomes infected, there may be a failure of union of the bone, but there will always be an ankylosis of the joint. You are confronted by a double evil, because



Fig. 6-B—After Operation.

you interfere with the resistance of the tissue already lowered by the trauma by adding an additional trauma and admitting additional microorganisms.

Another element that seems to be overlooked in the management of fractures is the one of time. How long does it take a fracture to unite? That depends on the age of the patient, the constitutional condition of the patient, and the location of the fracture. When you read over the surgery of Gross, which was



Fig. 7—Before Operation.



Fig. 8—After Operation.

a masterpiece in its time, you will find that he said he did not believe he ever saw a union of an intracapsular fracture of the femur. Every surgeon of experience, since the x-ray has come into vogue, knows that it does occur, and I estimate that the reasons that it does not occur more commonly or that we have failure of union so frequently, is that we have been



Fig. 9—Before Operation.

expecting union to take place in the neck of the femur in five or six weeks in place of twelve to eighteen weeks. That is the reason. No intracapsular fracture of the femur ever has a bony union in from six to eight weeks. In nailing a fracture of the neck of the femur, we never think of allowing the patient to get out of bed inside of twelve to sixteen weeks, or in some cases from fourteen to eighteen weeks, and this is with absolute mechanical fixation. With a less secure mechanical fixation, as by extension and abduction we need a still longer period of time, from sixteen to eighteen weeks in adults. The element of time is superlatively important in these cases. In the fractures of the shaft of the femur, it should be eight to ten weeks, if the fracture is maintained in good position and not absolutely immobilized. If there is complete immobilization by plaster cast, Lane plate or screw, it takes a much longer time for the process of ossific repair to take place, and that must be considered in the treatment of the case.

In taking up these cases to-day, we will endeavor, with the aid of a few slides, to mention a few of the most essential features in connection with the primary treatment, and point out a few of the pitfalls that lead to disastrous results, and consider only incidentally the technic of the method of relieving the result after it has occurred.

The great majority of fractures of the simple type must always be handled as simple fractures, and must not be plated or nailed; in other words, they must not be compounded.



Fig. 10—After Operation.

A wave has gone over this country and over other countries, under the stimulation of that master workman, Mr. Lane, and men have believed that they could go in and fix these fractures with plates and screws, compound the fractures, and get good results. They did not take into consideration the personal equation and the fact that Mr. Lane is a master technician; that he can get complete fixation of any fracture without ever contacting his gloved hand with the wound or any part of the instrument that subsequently touches the wound. The world has adopted his plan without taking into consideration the fact that a compound fracture or an acutely fractured limb is very much more easily infected than is the peritoneal cavity. That tissue has nothing like the resistance either in animals or man that the peritoneum has, and as a sequence of that we have had disastrous results with plating in treating fractures.

In Chicago, the Chairman of the Medico-Legal Society came into my office one day in great tribulation, and said, "Doctor, unless we stop treating simple fractures with nails.



Fig. 11—Photo One.



Fig. 11—Photo Two.

plates and wires, we will not be able to raise a sufficient fund for the defense of members of the profession in malpractice suits, not to

speak about paying damages." That expresses the present situation. We can still treat a large percentage of cases by external appliances, as we did fifteen to fifty years ago, and get as good results as we can by compounding them, if we give the cases intelligent and careful attention. This is all probably due to the fact that for ten or nearly twenty years it was considered decidedly out of form in a medical society to speak on such a simple subject as fractures. One had to speak about tumors, about the removal of the Gasserian ganglion, about extirpations of the kidney, pyloric resection, etc., etc., and it was not quite up to the dignity of the profession for one to talk about fractures. (Applause). In the last decade we have changed our position in that regard very much. To-day bone surgery is one of the prominent factors in every surgical meeting, and not only bone and joint surgery but the operative management of simple fractures.

With the preliminary remarks as a basis for action and treatment, we will now take up the individual fractures.

The fracture that gives us the greatest percentage of bad results of any fracture in the body is the Colles fracture. Fortunately, when an evil result occurs it is one of deformity rather than of incapacity. A Colles fracture is the sequence of an evil result, because in the reduction of the deformity we do not bring the lower fragment sufficiently forward on the lower end of the upper fragment. It is always a palmar pressure fracture. The lower fragment is thrown backward and upward and must rest on the dorsum of the radius at an obtuse angle with the shaft. Contraction of the hand follows, and as the result of faulty position the fragments are locked or impacted in that position. What is the most essential factor in treating a Colles' fracture? To make a complete and effective reduction. How is this accomplished? By increasing the deformity until the lower fragment is at right angles with the upper; then place the lower fragment downward with the thumb until it is below the level of the lower end of the upper fragment; then swing it forward and it will come easily into position. If it does not remain in position without mechanical support, reduction is imperfect. If the patient should be kept awake that night with pain, the reduction is imperfect. The best way to make the reduction is under an anesthetic, nitrous oxid if you have it at hand. It can be done with ether. It is very essential to unlock the fragment, push it down, let it fall forward, where it stays. Then put on a splint, a Smith's, Brown's or Jones' splint, and if it gives sufficient mechanical support on the posterior surface of the hand and the arm, the



Fig. 12—Before Operation.



Fig. 12—Before Operation.



Fig. 12—After Operation.



Fig. 12—After Operation.



Fig. 13—Photo One.

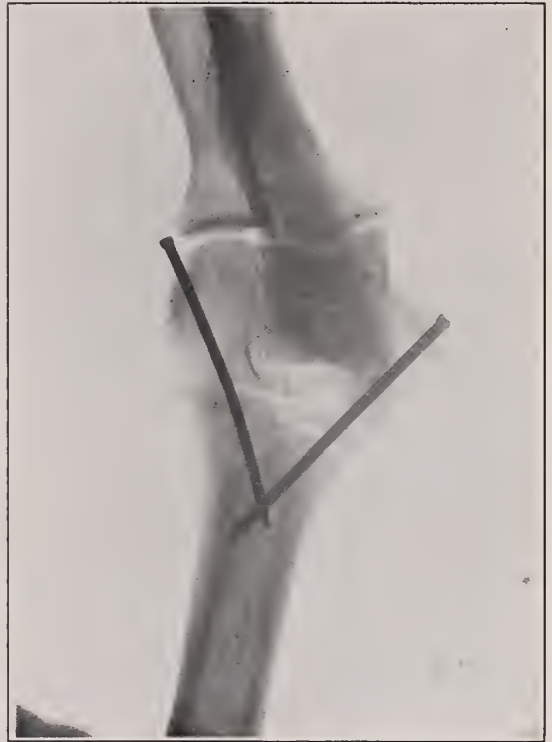


Fig. 13—Photo Three.



Fig. 13—Photo Two.

result will be good. The simplest splint is a strip of plaster of Paris put on with the long axis of the arm, never circular, and let harden in that position. No splint will secure a good result unless you have performed proper re-

duction. The fingers should move in the splint and should be exercised every day after the reduction. The wrist joint should be immobilized for five weeks.

Fig. 7 is another slide from an X-ray. From a practical standpoint one could scarcely say that there was a deformity. The result is evil, and this is one of the misleading features of the X-ray. You will notice, when you look at the X-ray picture, what has happened. There is scarcely any deformity behind or in front, but there is change of the articular surface of the radius from an anterior inclination angle to a posterior inclination angle. In some of the cases, one has to look at the picture a number of times to determine that there is really a fracture. The resulting deformity of backward displacement is disfiguring to the hand and annoying to the patient. It can only be successfully treated by completing the fracture, increasing the deformity, and swinging it around in the same way as one would with a superlative primary deformity following a fracture. We have had half a dozen of this class of impacted fracture cases for secondary

operation within the last year. The results after operation are gratifying as shown in Fig. 8. A correct early treatment will prevent their necessity.

Fig. 9 is a slide showing the surgical treatment of one of these evil results. This was a Colles fracture which united in a bad position. Refracture was done, and a single nail was driven through the styloid process into the shaft. The result was all that could be desired. (Fig. 10.)

Here is a picture of another case treated in the same way—by making an incision large enough for the admission of the nail and driving the nail through the shaft of the radius, putting on a dressing, and placing the limb in a sling so that the fracture cannot get out of position. In doing this one does not compound the fracture. You make your incision large enough so that the nail does not touch the skin when it is driven in, otherwise you carry in the epithelial cells of the skin with their staphylococci and cause trouble.

Here is another type of wrist fracture. The injury in this case was caused by the patient falling on the back of the hand—a dorsal pressure fracture is never a Colles' fracture. This fracture, however, was treated as a Colles fracture, and an overcorrection was produced with this evil result. That patient did not remain for treatment. He came to the clinic for examination one day and then disappeared.

Here is another picture of a fracture of both bones of the forearm from backward pressure. The patient fell forward, the hand doubled under and there was a fracture of both bones of the forearm as a result. Such a fracture cannot be kept in position by any splint. It is one of the cases in which operation should be done in from eight to ten days after the fracture occurs—simple nailing through the styloid processes of both bones into the shafts.

This case was a fracture without the destruction of bone. In our modern treatment of fractures at the junction of the lower with the middle third of the forearm, both by plating and without plating, we have the greatest percentage of non-unions of any fractures in the body, and many more than we had preceding the plating or nailing treatment epoch.



Fig. 14—Photo One.

Preceding that epoch, the greatest percentage of non-unions occurred at the junction of the upper with the middle third of the humerus. From the lower to the middle third of the bones of the forearm you have a position in



Fig. 14—Photo Two.

which you have the most common failure of union. With the medullary graft, the intermediate graft, the subperiosteal graft, failure of union is more common than with the same

line of treatment in any other fracture of the body, because it is difficult to immobilize the hand and the forearm after one has put in the graft, and absolute immobilization is essential, as otherwise the graft through the motion is covered over with a connective tissue capsule in place of being penetrated by the Haversian vessels from the bone ends. A fibrous capsule is formed on the graft in place of the bony union. In these cases we do the type of operation called the medullary graft operation.

In our method of treatment for non-union, we have changed the technic in one particular only, in the grafting. The same rules that were laid down in our original paper are carried out with this exception—that we elevate the periosteum from the bone for one inch above and below the point of non-union. This is a practice now followed in all of our non-union cases. In place of cutting the periosteum off plumb with the line of fracture and removing the fibrous capsule that is keeping up the non-union, we cut off the ends, elevate the periosteum, and displace it away from the bone. If we have bone fragments, we let them fill in between periosteum and bone, and if we have no bone fragments, a hematoma forms beneath the periosteum and the bone, which subsequently ossifies. That is an important factor in the osteogenesis following approximation.

Next in frequency in evil results is the type of fracture at the elbow joint. Fractures of the elbow joint are common in children. In this picture (Fig. 11.) you will note a fracture of both condyles, with backward luxation. The patient was treated by the application of a rectangular splint. These cases are commonly treated by an endeavor to apply a rectangular splint sufficiently forcible to reduce the deformity and maintain the apposition. To maintain the apposition, reduce the deformity that sounds like a Hibernianism, but it is not; it is the truth. You will note in that hand, a picture of which you just saw, a curved condition of the fingers, the claw-hammer hand, the result of what? A Volkmann's contraction, the sequence of a dressing too tightly applied. A tight dressing, plaster cast, splint or circular bandage produces a pressure myositis in the muscles of the forearm and contraction of the tendons with deformity of the hand. This result is appallingly common. It is practically always avoidable. The major portion of the destruction of cells occurs within the first forty-eight hours after the bandage is applied. That this destruction is taking place is announced with the greatest possible force by the patient's continual complaint of pain, and the swelling of the hand from the dressings. The pain is

Nature's appeal to you to relieve the tension of the dressing, and unless you have this clearly in your mind that this dressing must be loosened and relieved inside of twenty-four hours, you are going to have a maximum destruction of the muscles. The patient will not show the contraction in the first day; it will be two, three or even six weeks before the 'claw' or crow hand contraction appears—that shocking deformity. In many cases it is practically impossible to overcome it by a subsequent operation. The same caution that you exercise in the management of Colles' fractures, namely, taking off the dressing when the patient commences to complain of severe pain, is doubly important in fractures at the elbow. In the elbow it is grossly wrong to permit the bandage to remain if the patient is suffering from severe pain.

May I relate the story of a case that came to me from a city not far from Chicago last spring? The patient gave this history. He sustained a fracture of both condyles of the humerus; a dressing was put on, a circular binder applied, and this was left on the patient for five weeks. He was given from 1-2 to 1-3 of a grain of morphine three to five times a day to allay the pain. What was left of the forearm when the bandage was removed? Nothing but the bone and skin, and the latter had sloughed in three different places. The elbow was absolutely fixed and his fingers and forearm are worthless and irreparable.

Pain is the indication to the patient that something is radically wrong underneath the dressings, and in the treatment of fractures at the elbow, especially, the surgeon should never leave the patient's home without instructing someone to have a scissors ready to cut the bandage if the patient is suffering severe pain. It does not matter whether the fracture is twenty-four, forty-eight or seventy-two hours old; if you put on a dressing and it causes pain, it should be loosened so as not to injure the patient.

The reduction of these fractures is difficult. My early association with the late Dr. Lee in treating fractures was before the days of operation. We made extension to increase the deformity, moved the forearm around forward and dressed it folded on the arm, so as to make a splint of the arm for the forearm. While this reduced the fracture, there is in it an element of danger for if the patient suffers pain from the position you will know he is having venous stasis at the elbow, and that beneath the fascia of his forearm he is having edema of his muscle cells which will subsequently produce contraction and deformity and even a Volkmann's condition. It is not in the true sense of the word a Volkmann's paralysis, but a contraction of the mus-



Fig. 15—Before Operation.



Fig. 15—Before Operation.



Fig. 15—After Operation.



Fig. 15—After Operation.

cle from cicatrizing myositis. You have the same indication in this dressing that you have with the splint. If the pain is severe, take off the dressing, and give the circulation an opportunity to be re-established.

Here is a typical case of tight dressing. I think it is a case in which the dressing was kept tight for forty-eight hours. We have had one case in which the dressing was taken off in less than forty-eight hours because there was threatened gangrene of the fingers. I think this is the case that had the forty-eight hour pressure, and still you will note it had this evil result. This case illustrates the evil results of excessive compression, even of short duration, in fractures at the elbow-joint.

Fig. 12 is a type of fracture that often leads to an evil result. The arm at the elbow is in the position of lordosis, of hyperextension, both condyles having been carried backward. In the early management of that anterior dressing with an acute angle, we used the arm or humerus as a splint. In the subsequent management of it, it is important not to make a transverse section of the bone, because that is difficult to control. In operating, we expose the supracondyloid notch, use the chisel for making a v-shaped division of the bone, and swing the elbow forward so that we have a double-A division of the bone. This does not admit of luxation forward or backward. It stays in position all the time, you get union in that relationship, and you have no subsequent trouble from it.

Here is still another of these cases. This was due to another cause, namely, to anterior luxation of the upper end of the radius, luxating it from the lesser sigmoid notch, and when the patient endeavored to make flexion, the end of the radius contacted against the anterior surface of the humerus and flexion was impossible. In order to keep the bone down in position a tight bandage was applied and the sequence was a myositis without the reduction of the deformity. That is one of the most difficult of all conditions to treat, even when recognized, and the operative treatment is the only means of assuring a good result. The operation consists in making a reduction of the head back into the lesser sigmoid notch, and then putting a nail-drill transversely through the radius at the tuberosity and also through the ulna. Cut the nail drill off just below the skin and close over the skin. Dress the arm in superlative supination. Permit the drill to remain for six weeks. By the end of that time the capsule will have reunited and the radius will remain in its normal relationship. There is no danger of ossification between the radius and the ulna at the point at which the drill is inserted.

Here is a fracture of the capitellum, the capitellum having been luxated upward for three inches under the biceps muscle. You can see from the picture that the capitellum is absent in its normal relationship to the head of the radius. There is an exostosis where the capitellum formerly rested. We removed the capitellum and the exostosis, and that gave a good result.

Fig. 13 is another case in which the management is illustrated by the application of our extra-articular, non-bloody nailing method. You can see how perfectly it is reduced and how the nails are driven through both condyles of the humerus, extra-articularly, that is, through the neck of the condyle into the shaft, without compounding the fracture. The drill is cut off down to a level with the bone and the skin sutured over it.

Here is a fracture just above the condyle treated by the same type of nailing from the epicondylar elevation and the nail driven into the shaft.

Fig. 14 is a picture of the fracture of the olecranon. These fractures are difficult to manage. Some years ago we devised a method of extra-articular wiring in these cases, without compounding the fracture or opening the joint. It filled the purpose of that time. In these cases, we simply straighten out the ulna, make an incision over the posterior end of the olecranon large enough for the admission of a long nail, and drive a 10-penny nail through the olecranon and down into the shaft of the ulna. That is all that needs to be done. Then put the patient's arm in a sling.

Here is a case of internal luxation of both bones of the forearm at the elbow. These luxation cannot be reduced by any other method except by hyperextension, which luxates the margin of the trochlea forward out of the greater sigmoid notch and permits one then to press both bones of the forearm outward by taking advantage of the fulcrum pressure of the olecranon in the olecranon fossa.

Fig. 15 is a luxation inward. If you put the olecranon in the notch, hyperextend it, it cannot be reduced in that way except by an open operation, and that is one of the serious evil results that comes to us for late operation. It is then a very difficult proposition, as we have to divide all of the capsule of the joint to effect reduction, whereas an early reduction can be very easily made.

Fig. 15 shows the external condyle nailed and the olecranon nailed.

Here is a case of posterior luxation of both bones of the forearm. How does one reduce a posterior luxation of both bones? I had such a case at my clinic yesterday, and another last Thursday. Neither of them had been reduced. In treating them an endeavor



Fig. 16—Before Operation..



Fig. 18—After Operation.



Fig. 17—Before Operation.

was made to dress both at right angles. The head of the humerus was in a position anterior to the coronoid process, and in endeavoring to reduce it, the more pressure one made in a flexion direction, the more securely was the humerus locked in its abnormal position.

When posterior luxation has occurred, reduction is effected by hyperextending the forearm, so as to unlock the lower end of the humerus from its position anterior to the coronoid process; then downward and backward traction is made until one feels the humerus sliding over the point of the coronoid into the sigmoidal cavity. The forearm can then be readily flexed until the fingers can be touched to the shoulder. It should be dressed in a rectangular position and immobilized for a period of five weeks, without active or passive motion throughout that entire time. The fracture is easy of reduction when fresh, but subsequent reduction has to be brought about by operation, which usually requires excision of the joint and an arthroplasty, a very extensive procedure.

You will note how much time I have devoted to the elbow-joint. And that is because it is in the elbow-joint that one has so many very bad results from the standpoint of service. The Colles' fracture result does not incapacitate the patient from service. The elbow-joint fracture and luxation, if unreduced, incapacitate a patient very materially. And that is why they must have special attention and special care, first, as to diagnosis, as reading

of the X-ray is difficult in the elbow-joint lesions, second, as to complete reduction, third, as to maintenance of reduction without pressure, and fourth, never to institute passive motion until five weeks after the reduction has been effected, because by so doing you bring about an additional laceration, additional connective tissue formation, additional cicatricial formation and an additional disadvantage to the patient in the way of fixation.

A fracture or luxation of the shoulder-joint is often difficult to diagnose from an

patient is permitted to go on until union occurs or until deformity occurs and incapacity is recognized. When there is a luxation and fracture, operation is the only method of reduction. Operation should be done from the eighth to the twelfth day after the accident, never earlier. The operation consists of making an incision anterior to the deltoid margin and separating it from the pectoralis major, exposing the head, freeing the head, and if necessary taking it out on the table, opening up the lacerated capsule, exposing the glenoid cavity, squaring the splintered head and the roughened end of the lower fragment, nailing the head back into position on the humerus and then replacing the head into the glenoid cavity. Formerly we removed the head entirely. It is absolutely essential to the subsequent use of the arm that the head should never be excised in simple fractures of the upper end of the humerus, but should be replaced and fixed. In a compound fracture, the head should be taken out and left out.

Here is an illustration of an interesting condition. It was a double fracture—a fracture of the surgical neck of the humerus with luxation into a glenoid space (Fig. 16.) and a fracture of the humerus at the juncture of the middle with the upper third. (Fig. 17). The head was taken out on the table, the tissues freshened and a screw driven into the head of the shaft side. Fig. 18, was taken one month and five days after preliminary operation. The fracture of the neck was operated on on the tenth day; the fracture of the shaft three weeks later, using two circular phosphor bronze wires to bring the fragments into position. We did not dare do both operations at once, as if infection occurred in either one, it would have involved the other and the patient's arm would probably have been sacrificed. There would not be any special effort at bony union in three weeks, so we could just as well postpone the second operation until primary union of the soft parts has taken place.

The next type of fracture which I will show you is one that often gets the general practitioner into trouble. It is an injury to the ankle-joint, the Potts' type of fracture, always an eversion fracture, involving definite elements, a fracture of the external malleolus always; a fracture of the internal malleolus often; laceration of the interosseous ligament practically always, with eversion of the foot, and occasionally also a posterior luxation of the astragalus.

Fig. 19 shows all the phases of a typical Potts fracture. Note at (a) how the external angle of the articular surface of the astragalus becomes a wedge to lacerate the interosseous ligament.



Fig. 19—Before Operation.

X-ray standpoint. It is not difficult to treat. When the head is in the glenoid cavity the management is easy, both with and without operation; with operation by the method of nailing, without operation by placing the part in a fairly easy position.

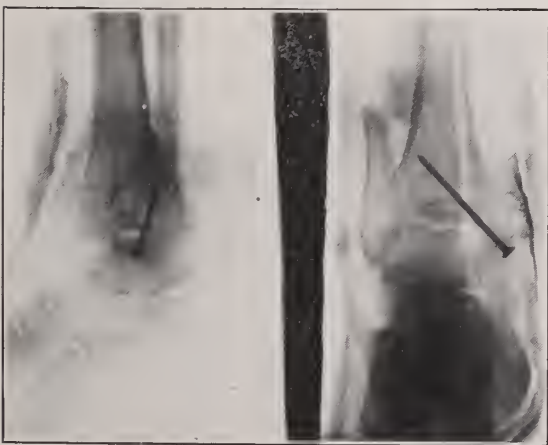


Fig. 19—After Operation.

One of the conditions not recognized in fractures of the shoulder is the one illustrated here, namely, a subglenoid luxation of the head with fracture of the surgical neck. The

In what does a reduction of a Potts' fracture consist? First, in extending the foot to the superlative degree, reducing the posterior luxation of the astragalus by traction forward with the foot extended. If one can bring the foot forward in dorsal flexion to an acute angle with the leg, reduction is complete. Then evert the foot *en masse*, increasing the deformity by turning the sole of the foot outward, making traction downward and then displacing the entire foot inward as far as the fibula will permit. Retain it in that position with the foot at right angles to the leg for from four to seven weeks, and without passive motion.



Fig. 20—Photo One.

Fig. 19-B. is an illustration of anterior luxation of lower end of the tibia, by splitting off the posterior half of the articular surface. When this fracture occurs, it is impossible to bring the foot around to right angles until complete reduction is effected. Therefore, what should be done? You increase the deformity by putting the foot on a straight line with the leg, making a skid of the superior surface of the astragalus, sliding it downward and bringing the foot around at right angles and maintaining it there.

Here is still another type, namely, a splitting of the lower end of the tibia. (Fig. 20.) It shows the posterior portion below the level at the articular surface of the astragalus and



Fig. 20—Photo Two.

behind. After making extension and reduction as described above, insert a simple screw from before backward and retain it in that position. You do not need to plate it.

In the management of the Potts' type of fracture, superlative adduction of the foot in the cast is necessary that a good result may obtain. If you have a fracture from inversion of the foot (Fig. 21) with splitting of the tibia, and you treat it in superlative adduction, you will have an evil result. This type of fracture cannot be treated by any routine method: it must be an individual method.

Here is another case of the same type. There is a typical deformity for an ancient Potts' fracture with subsequent operation. In operating on a Potts' fracture after deformity has occurred, which then becomes an ancient Potts' fracture, we find it is the most difficult of all bone and joint operations. There is no bone operation, not even an arthroplasty for the construction of a new hip or knee, that gives me so much anxiety and so many technical difficulties as does the opera-

tive treatment of an ancient bad Potts' fracture. The joint has to be chiselled to pieces



Fig. 21—Photo One.

before the reduction can be effected and almost all of the soft parts have to be cut off. When one looks at it immediately after operation, he wonders how such a result could ever occur, but notwithstanding all the difficulties, our results with one exception have been uniformly good, which is the justification for my continuance of the procedure.

Here is still another type of fracture in which the bones were all fragmented and we had to use many Lane plates to maintain the fragments in any sort of apposition.

This case was a recurring luxation by inversion of the foot, due to a congenitally short internal malleolus, which came down only to the level of the articular surface of the tibia. We operated by freeing a strip of bone, extending upward a distance of about three inches on the inner side of the tibia from the tip of the tibial malleolus. We then slipped this fragment downward until we had an elongated internal malleolus and screwed the fragment into position. The patient had a perfect result.

Fig. 22 shows deformity when the fracture of the malleoli was on a level with the articu-

lar end of the tibia, and mal-union resulted. Fig 23 shows the condition corrected and maintained in position by nails.

Here is the case of a man who came to my office complaining of the treatment his doctor had given him. He had sustained an injury which was supposed to be a Potts' fracture. It had been dressed in the usual way, with the plaster of Paris and adduction of the foot and dorsal flexion. When the dressing was removed, the patient said that the leg looked perfectly normal. But look at it in the picture. It is a typical Charcot ankle following a Potts' fracture. That it is a Charcot ankle is supported by the facts that the man had no pain at the time of the fracture; he has a primary Romberg, an absence of patellar reflexes and an Argyll Robertson pupil and extensive absorption of the lower end of the tibia with subperiosteal exostoses about the joint. It was treated subsequently by an excision of the ankle joint and an arthrodesis, driving a 14-penny nail through the os calcis



Fig. 21—Photo Two.

and astragalus into his tibia until bony union had taken place between the astragalus and the tibia. This procedure gave a very serviceable though a somewhat deformed foot.

We come next to a line of fractures that gives us much trouble. Here is an example



Fig. 21—Photo Three.



Fig. 23—After Operation.



Fig. 22—Before Operation.



Fig. 24—Before Operation.



Fig. 24—After Operation.

of a young man hazed by his fellow students. He sustained a fracture just above the epiphyseal line of the lower end of the femur with external luxation. (Fig. 24). He was anesthetized, the fracture was reduced, and just as long as the hands were kept on the leg, you could retain it in position, but as soon as the hands were removed, the fragments slipped out of alignment. The line of treatment we follow in this class of cases is illustrated here. The reduction was effected, an incision was made in the skin large enough to admit a 12-penny wire nail. This was driven through the condyle and on up into the shaft. The opening in the skin was closed with a horse hair suture and the leg was placed in a wire gauze dressing. The result was perfect.

Here is another evil result from a fracture close to the joint. Here the seat of the fracture is so far above the joint that a nail could not be used to advantage. There is a posterior luxation of the upper end of the lower fragment, (Fig. 25) pressing into the blood vessels and nerves of the popliteal space. The lower fragment was split in the intercondyloid notch through to the knee-joint (Fig. 26). The knee-joint was full of blood. This woman was rather



Fig. 26—Before Operation.

stout, weighing 186 pounds. We treated this case with a Lane plate with long screws penetrating into both condyles and holding them in accurate apposition. (Fig. 27). She made a perfect recovery and the result was good.

This shows two methods of treating these types of splitting fractures. There is still another type of impacted fracture of the external or internal tuberosity of the tibia. These must be treated on the same line of extra-articular nailing after reduction, as indicated above; that is, without an open operation.

Here is an illustration of a fracture of the



Fig. 25—Before Operation.



Fig. 27—After Operation.

patella. It is of no special significance because the method of treatment is a well-recognized one.

Here is a case illustrating non-union. al-



Fig. 28.



Fig. 29.

though the fragments are in excellent apposition through the support of a Lane plate. When you have non-union as the result of an open operation, the result of a compound or simple fracture, autogenous grafting is the line of treatment. Taking the periosteum with the bone, the medullary graft is the easiest one to use. If it cannot be used, then

the subperiosteal graft is next, and after that the intermediate graft.

Fig. 28 shows an impacted fracture of the internal tuberosity operated subsequently, simply by making an incision into the joint and drawing it inward again in the way described. Fig. 29 is a schematic illustration of how inter-condyloid and tuberosity fractures are handled. Impacted fractures of the tuberosities are often overlooked. There is



Fig. 30.

no crepitus, though there is a deviation of conformation, which should be recognized at once when the limb is placed in a straight position.

Fig. 30 is a case with a medullary metallic transplant. Formerly we used bone transplants altogether. Now, we make a medullary aluminum, magnesium or silver metal implant. You can see that it is a four-edged piece of metal put in the medulla. You can slip it farther up or down, as the case may be, and push it back into position. It is easier to insert than a plate. In the shaft of the femur the medullary metal implant has enormous physical strength as compared with the peripheral metal support.

Fig. 31 is a case of fracture of neck of the femur, the last fracture we shall speak about. Fractures of the neck of the femur give evil results when intracapsular. You will note the enormous absorption of the neck that takes



Fig. 31—Before Operation.



Fig. 33—Before Operation.



Fig. 32—After Operation.



Fig. 34—After Operation.

place in these fractures; Fig. 32 shows the method of nailing and fixing in abduction for repair. They do not give evil results when they are extracapsular, provided that sufficient extension is kept up and the limb is immobilized for a long period of time. They should always be dressed with heavy extension and always with a double abduction splint. Intracapsular fractures if treated on the same basis, that is, with a double abduction splint, with an extension sufficient to overcome the shortening and if maintained in that position *from fourteen to eighteen weeks*, depending on the age of the patient, will give with great regularity, I

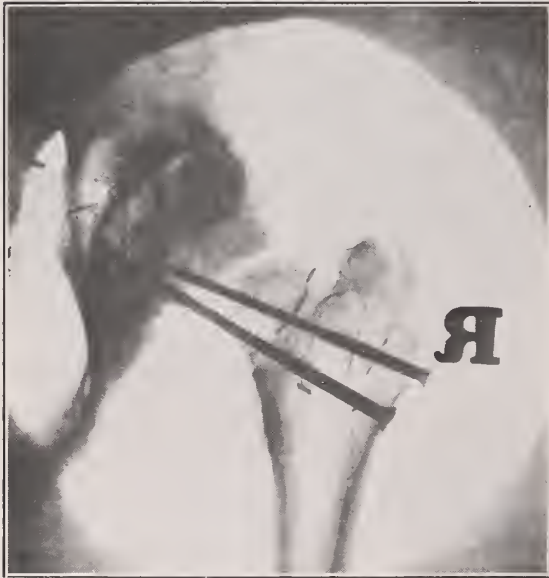


Fig. 35.

almost said with great uniformity, a bony union as the result. They will not give a bony union unless they are maintained in absolute rest during the entire period and with sufficient extension.

This statement seems appalling when contrasted with the failures of union which have been recorded for centuries. It is, however, a statement based on clinical observations and on facts, and can be verified by anyone who will treat a fracture of the neck of the femur on exactly these lines, but he cannot compromise the details and expect to get a good result: in other words, he cannot short circuit to a good result.

Let me speak incidentally about another important factor that we as a profession have overlooked for years, and that is the management of tuberculosis of the hip-joint. We treat it with the ambulatory splint; we treat it with a cast, with rest in bed, but with all of these methods we have permitted the limb to get into a position of adduction and when the head is absorbed or destroyed, there is lux-

ation upward of the neck onto the dorsum of the ilium and the patient comes into the office years afterward with the limb three to five inches short in a superlatively adduction position, from which it is impossible ever fully to correct it. Why? Because we have permitted, during the process of destruction of the head, the limb to get into an adducted position and have allowed the neck to slide up on the margin of the acetabulum. If the limb were dressed in a double abduction splint from the beginning, the head and neck could never get out of the acetabulum, and when the inflammation of the infective process was repaired, when the tuberculosis was healed, no matter how much destruction has taken place in the neck, the neck would still be in the acetabulum and one can subsequently do an osteotomy to correct the abduction if it is in excess, or do an arthroplasty to make a new joint. One can never overcome that deformity in shortening that results where the neck has slipped up from the margin of the acetabulum, which deformity is unnecessary and never could occur if the patient is dressed from the beginning in a double abduction splint. This deformity seems unpardonable, as the profession has permitted it to occur for centuries, when it is so easily avoided. The ambulatory treatment of coxitis, responsible for so many of these deformities, is inadequate and inefficient in the management of these cases.

There is one other fracture I wish to call attention to, as it was treated by a deviation from our former method. It was a fracture of the neck of the femur with luxation of the head of the dorsum of the ilium. (Fig. 33). The head was replaced in the acetabulum and the neck nailed to it. (Fig. 34). That operation was done several years ago and the result has continued good. It is not a difficult operation and gives good results. In this case a union took place and motion was splendid.

Here is a picture showing that the insertion of a single screw into the remaining portion of the head is not always sufficient. The bone softens, absorbs, pressure absorption takes place, and there is no line of union established. We have changed our method of application of the screws in this class of cases where the head fragment is small, and do not put them into the head, but pass them below from the trochanter into the ischium, fixing and screwing the shaft to the ischium. (Fig. 35). That forces the neck into position, and does not permit of any motion at the line of union and does not encourage absorption of the head. After union has taken place the screws are taken out and the joint motion has not been interfered with.

I thank you. (Great Applause).

DIFFICULT PRESENTATIONS.*

By EDWARD SPEIDEL, Louisville.

LANTERN SLIDE AND MANIKIN DEMONSTRATION.

Simplicity, watchful waiting and prompt interference when indicated are the key note of successful obstetrical procedure in my experience. And so in the description of malpresentations about to be exhibited I will describe only those means which from my experience and from the literature have proven most effective and practical in effecting a delivery.



Fig. 199.

Occipito posterior, the most frequent of our malpresentations in our hospital practice causes us but little anxiety. The patient is not allowed to become exhausted. If full dilatation and rotation do not occur in a reasonable time then a hypodermic of morphine with postural treatment is generally followed in five or six hours by an easy delivery. Contrary to the text books I place my patients on the side opposite to that to which the occiput points, that is in the right occipito position the patient lies upon the left side during the morphine analgesia. In persistent occipito posterior cases with full dilatation and good pains I insert the full hand under anesthesia rotate the head having the body follow by assisting with a hand upon the abdomen, holding the head until the new position is se-

cured by a few additional pains and then awaiting a natural delivery. Use the left hand for the right occipito position and the

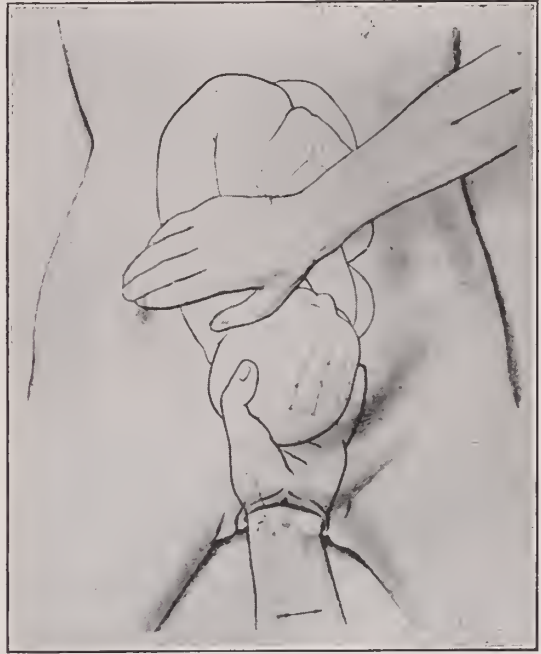


Fig. 127.

right hand for the left occipito position because a more comfortable grasp is secured in that way. If this fails then the forceps should be applied to the sides of the head in the oblique diameter so that in an right occipito position the locked handles will be directed toward the left thigh of the mother. Traction is at first directly downward, then when the head shows a tendency to rotate assist the movement gently and carefully with the forceps, always using downward traction with it and very shortly the rotated occiput with the forceps inverted will be brought under the symphysis pubis. Reapplication of the forceps in this new position will quickly terminate the labor.

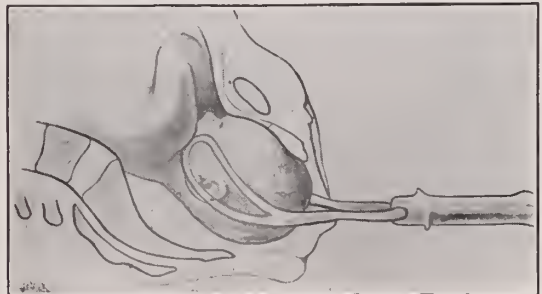


Fig. 869.

Even if the occiput does rotate into the hollow of the sacrum delivery will often be effected by nature after some time or the for-

*Read before the Kentucky State Medical Association, Louisville, September 21-23, 1915.

ceps may be applied and the head drawn out of the vulva. The head drawn out of the vulva, that is the proper expression in this delivery for, as every one knows, the head is enormously elongated and so the forceps must make traction in a horizontal direction until the nape of the neck impinges upon the posterior vaginal wall and then by carrying the handles downward and backward, the forehead and face will successively pass from out of the vagina and the head will be delivered.



Fig. 519.

Face presentations do not occur very frequently. Anterior positions of the chin should be left to nature. Nothing is gained by an attempt to convert them into vertex presentations, because the equally difficult posterior vertex positions would be the result. Descent is slow because the face is a poorer

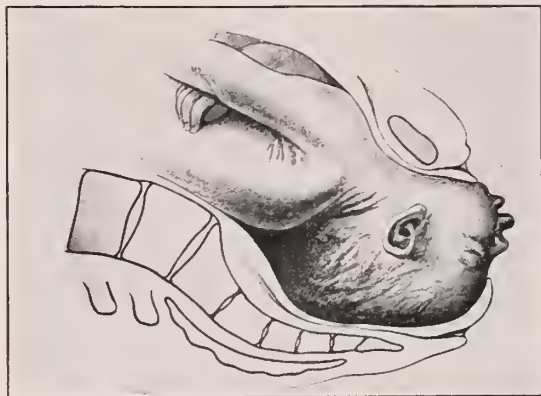


Fig. 522.

dilator of the cervix than the vertex. The bag of waters should not be ruptured under any circumstances. The child is in danger when the face has reached the perineum with the chin under the symphysis pubis. If the

face remains in this position too long, then dangerous asphyxia may result from pressure on the veins of the neck by the symphysis pubis. Forceps should be applied to the sides of the head to quickly terminate the labor under such circumstances.

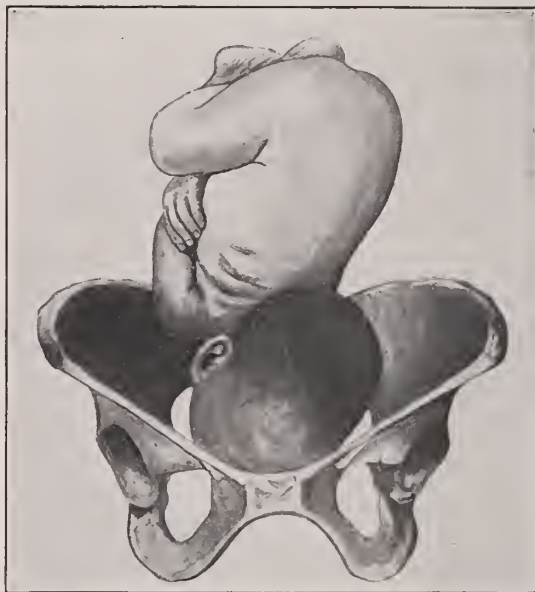


Fig. 520.

Posterior face presentations are dangerous at all times. Natural rotation may not occur and if the chin rotates into the hollow of the sacrum, then delivery may become impossible, because the head and shoulders become im-



Fig. 819.

packed in the pelvis and craniotomy is then the only relief for this condition. An attempt

should always be made to convert the posterior face into the very favorable anterior vertex position by combined manipulation of one hand introduced into the vagina under full anesthesia, assisted by the other hand on the abdomen which pushes against the sternum which is so characteristically prominent in these presentations. After conversion into an anterior vertex the head must be impressed into the pelvis for a number of pains in order to secure this new position until the end of the delivery. Even in late cases this method should be tried under full anesthesia before resorting to the more difficult measure of forceps delivery or a possible craniotomy due to rotation into the hollow of the sacrum. If manual conversion is not effective then forceps delivery must be tried but even there the chin must be rotated anteriorly by the hand before the forceps can be used with safety. The child's body must be rotated in the direction of the face or the chin will return to its posterior position before a blade of the forceps can be applied. The vertex is very much elongated in a face delivery consequently if there is any difficulty in locking the forceps it is due to the blades not passing beyond the elongated vertex. If the chin ro-

An incision one inch in length is made along the upper margin of the pubic bone from the

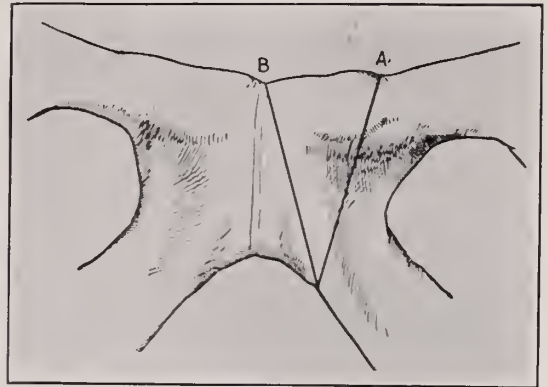


Fig. 166.

spine of the pubis inward. After incising the periosteum the tissues are separated from the posterior surface of the pubic bone with the finger. A curved artery forceps is then



Fig. 812.



Fig. 525.

tates into the hollow of the sacrum, then an impaction of the child will occur because the combined diameters of the vertex and the shoulders enter the superior strait at the same time. Craniotomy is the only means of delivery under such circumstances unless the child is small, then if it is in good condition there may be a possibility of delivering it alive if a pubiotomy is performed.

Modern pubiotomy is performed as follows:

passed along the posterior surface of the bone to its inferior margin when the handle should be depressed in order that the tip can be felt through the outer part of the labia majora which has been drawn to the opposite side. A small incision over the projection allows the tip of the artery forceps to protrude. One end of a Gigli saw is drawn through by this means, the handles attached and the bone severed.

The breech should be included in complicated deliveries because at best it always requires entirely different conduct from the ordinary vertex delivery. The bag of waters

should never be ruptured in order that the cervix may be fully dilated and offer no ob-

vulva, then the fundus of the uterus should be kept in close apposition to the child's head



Fig. 813.

stacle to the delivery of the after-coming shoulders and head. The patient should be placed crosswise of the bed when the breech appears at the vulva in order that the obstetrician be



Fig. 533.

not hampered in the manipulations necessary to effect a delivery. The legs should not be disengaged when the breech appears at the vulva in order that the full breech may stretch the muscles of the perineum and prevent lacerations in the manipulations that follow. When the breech emerges from the

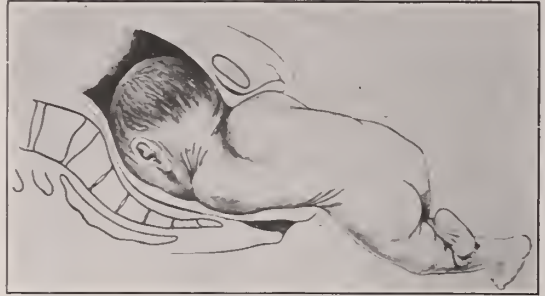


Fig. 537.

by an intelligent assistant who makes the proper manipulations upon the mother's abdomen. Make no traction upon the legs as they are released from the vulva, but allow the child to be forced down by natural pains until the scapula appear at the vulva. If the



Fig. 75.

labor has been properly conducted the arms of the child should be folded across the chest and slipping a few fingers up the back to the shoulders and then sliding them down to the crease of the elbow should slip each arm outward with ease, if the child's body is first held upwards toward the mother's abdomen for the posterior arm and then downward for the anterior. Then placing the body of the child astride of the left arm with a finger of that hand pressed firmly on each side of the nose and the fingers of the right hand thrown across the neck of the child, traction assisted by downward pressure upon the abdomen by the assistant should be made until the squa-



Fig. 82.



Fig. 83.

mous portion of the occipital bone appears under the symphysis, then with this as a fulcrum against the pubes the head can be easily turned out of the vulva by slowly raising the body of the child upward and toward the mother's abdomen. In case of delay or difficulty immediately apply the forceps to the sides of the child's head, raise the body and deliver.

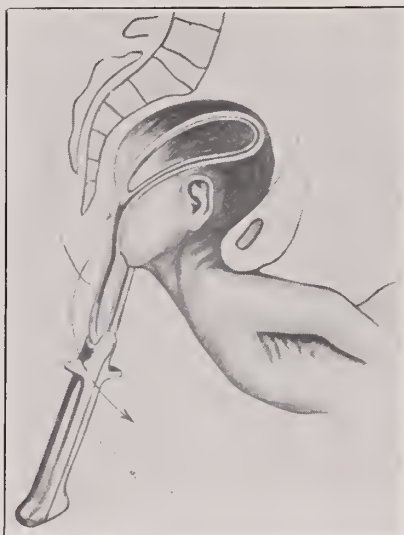


Fig. 845.

If the breech fails to enter the pelvis in spite of good labor pains, then the obstetrician should direct the uterus to the midline if a pendulous abdomen is the cause of the delay. If no abnormality can be detected then the



Fig. 534.

hand should be inserted under anesthesia and a single foot brought down. Further delivery should then be left to nature. Failure of the breech to engage should bring to the obstet-

rician's mind the possibility of a frank breech presentation.

The frank breech with the legs extended along the front of the child's body subjects the child to considerable danger in the delivery. Such a breech presents a smaller surface to the cervix for dilatation and after the breech has descended upon the perineum the extended legs acting as splints along the front of the child's body interferes with the lateral flexion which is so necessary a part of this stage of the delivery. The next book treatment of such a condition is to bring down one leg of the child as soon as the condition is discovered. The hand is introduced into the uterus under full anesthesia, passed up to the knee, the foot then pressed downward by flexion of the leg, the foot is grasped by throwing the fingers across the leg and ankle and the leg drawn out of the uterus along the front of the abdomen of the child. Further delivery should then be left to nature as in an ordinary breech presentation. There will be considerable delay and in consequence of the imperfect dilatation of the cervix and the perineum by the dissolved breech difficulty and danger in the delivery of the after-coming head and shoulders. This is so frequently the case that I have made up my mind to treat such cases in the future by Cesarean section. If the diagnosis is made by abdominal palpation as may be probable under very favorable

ed or asphyxiated during the delivery whilst the mother is in danger of a rupture of the uterns during the difficult extraction of the child's leg and to severe lacerations of the cervix and perineum during the delivery.

We generally diagnose our transverse presentations by finding a hand in or protruding from the vagina and consequently that is the class of cases that I will consider in this demonstration. With the child living, the proper and only treatment of course is podalic version under full anesthesia. Using the pro-



Fig. 133.

lapsed arm as a lever the head and shoulders should be pushed to the side and upwards while the other hand upon the abdomen pushes the breech toward the entrance of the pelvis. As soon as a foot can be grasped then

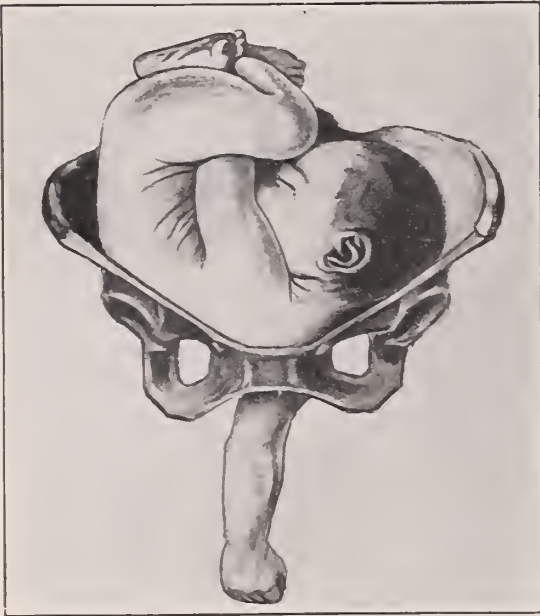


Fig. 345.



Fig. 134.

circumstances then Cesarean section should be done at once, and even later in labor it offers the best prognosis for both mother and child. As can be shown, the child is generally injur-

downward traction out of the uterns is practiced upon that foot, the head at the same time being directed toward the fundus of the

uterus by upward pressure of the other hand upon the abdomen. Further delivery is then



Fig. 136.

as in breech presentation. When the child is dead and the uterus is contracted down upon it, there is great danger of rupture of the uterus. By making firm downward traction upon the prolapsed arm and either twisting it off or amputating it with a scissors at the shoulder, easy access can generally be had to a foot and delivery can be effected with little or no manipulation of the uterus. I have found this easier and better than decapitation as advocated in the text books.

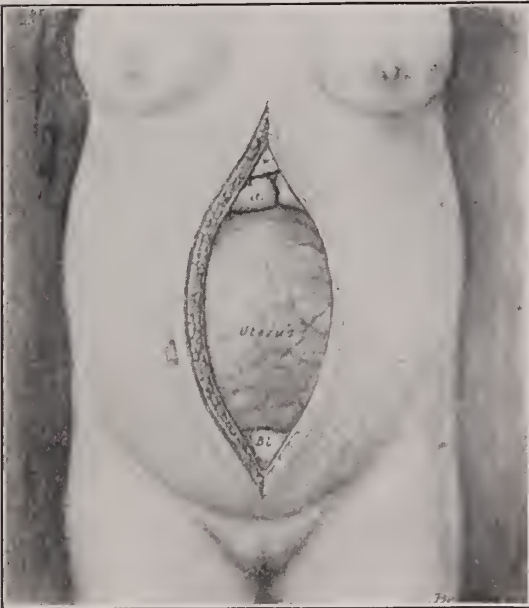


Fig. 410.

There is another class of cases which though not being per se malpresentations, cause great difficulty in delivery, possibly in consequence

of minor pelvic contraction, unusual prominence of the promontory of the sacrum or the presence of tumors about the pelvis of the mother, or disproportion between the size of the child's head and the mother's pelvis. These cases can be so readily and safely dealt with by an elective Cesarean section that when diagnosed early and in proper surround-



Fig. 411.

ings, there should be no choice. There is such an improvement in the modern technique for Cesarean section that it does away with many of the dangers and injurious effects of the old operation.



Fig. 1.

Formerly a long incision was made at least from the umbilicus to the symphysis pubis

with the probability of ventral hernia following the operation. The incision was generally made large enough to allow the gravid uterus to be delivered from the abdomen, with the consequent possibility of severe shock after the operation. Now, except where it is necessary to remove the uterus, or some complicating tumor at the same time the high operation is performed.

The abdomen is opened by a median incision entirely above the umbilicus, about four inches long. A large gauze pad is packed around the uterus to hold back the omentum and intestines and to absorb any liquor amnii and blood that may escape. An assistant holds the sides of the abdomen keeping the

I have performed three such operations in the last six months. In one instance the

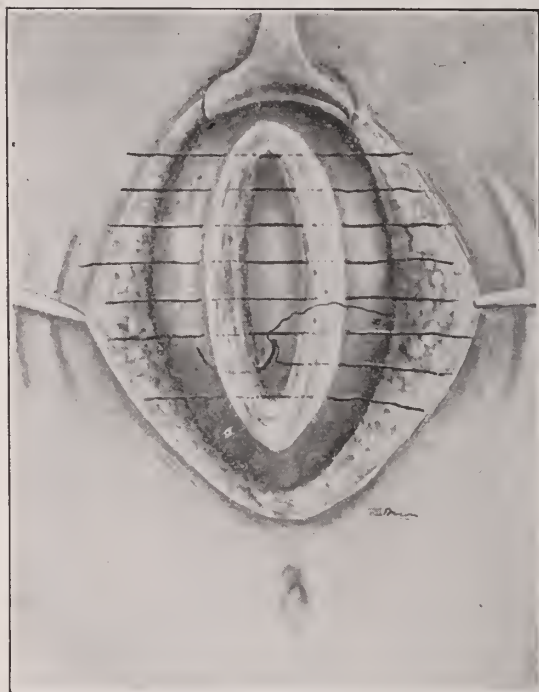


Fig. 3.

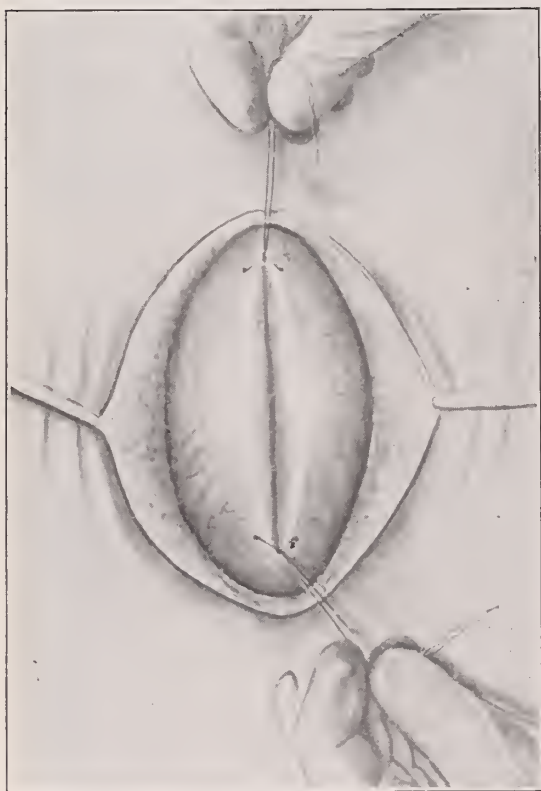


Fig. 2.

uterus directly in the mid line. The uterus is opened by an incision four or five inches long, in the median line from the fundus downward. If the bag of waters has not been ruptured then the separation of the placenta will be facilitated by sweeping the gloved hand between the distended membranes and the uterine wall. The membranes are not incised and the child delivered. An assistant now catches the upper angle of the uterine incision with a vulsellum forceps and by traction upwards practically controls the hemorrhage until the placenta has been delivered and the incision in the uterus has been closed.

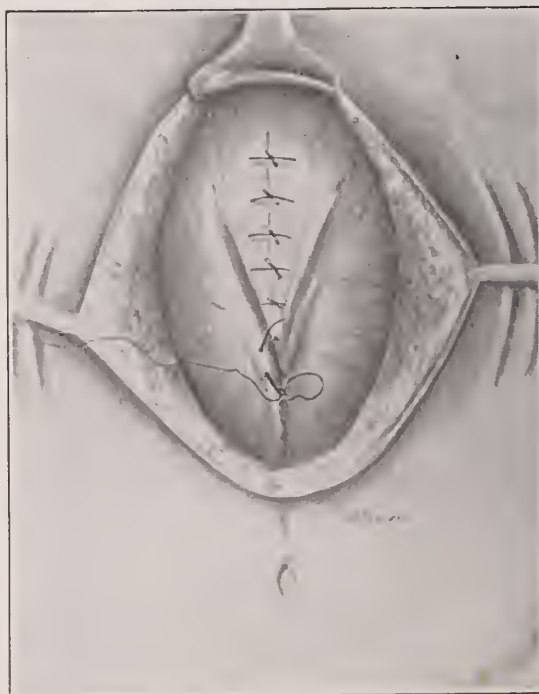


Fig. 4.

child's head would not enter the pelvis after a long labor with good pains and tentative application of the forceps. After Cesarean

section, measurements showed all diameters of the child's head from three-fourths to one

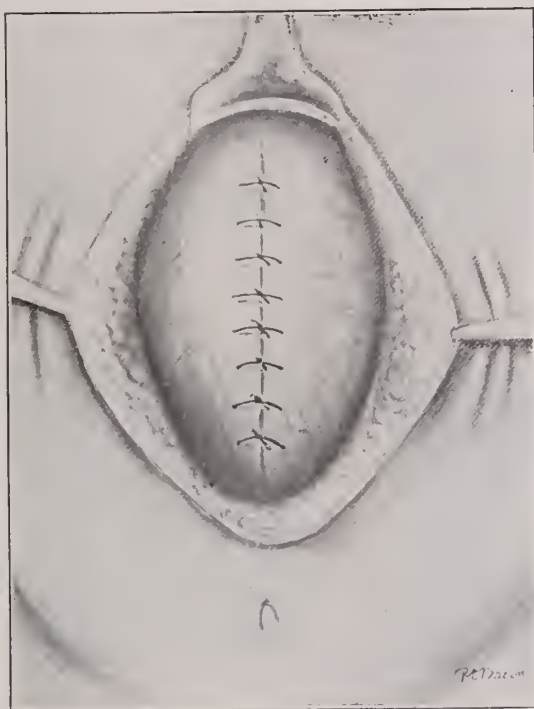


Fig. 5.

inch above normal. In the second case a short fat woman, weighing 190 pounds, in whom the head would not enter in spite of good pains and two attempts at forceps ex-



Fig. 6.

traction a Cesarean section was done with good results although no definite cause for the difficulty in delivery could be discovered during or after labor. In the last case associated with placenta previa centralis, for religious reasons it was decided to give the child the

best chance for its life by doing a Cesarean section.

The three patients, with babies, are alive and well at the present day, thus justifying the method of delivery in these instances.

VERUMONTANUM WITH REFERENCE TO REFERRED SYMPTOMS.*

(WITH LANTERN SLIDES.)

By GEO. H. DAY, Louisville.

In perusing the modern text book on urinary surgery one is rather surprised to note the dirth of information concerning these very interesting conditions of the verumontanum. Every urologist is burdened with a multitude of males belonging to the so-called class of neurotics. These men present an endless stream of symptoms referable to nearly every portion of the body and none traceable directly at first glance to the veru. Headaches, sacral pains, pain and burning at the meatus, heaviness in the perineum and urethra, different stages, heaviness in the perineum and urethra, different stages of impotency, erections without sexual excitement, pollutions, lack of mental concentration, and loss of interest in their surroundings are a few of the symptoms these patients present. It was only upon the introduction and improvement of the modern endoscope were we able to diagnose and treat pathological conditions in the posterior urethra and the verumontanum in particular. It is not possible by any other means to grasp the information so necessary in the relief of these symptoms.

The normal verumontanum is located in the prostatic urethra. It is about 3 mm. in height and about the same in width. It is situated upon the floor of the urethra, having openings on its lower front wall, the ejaculatory ducts, and on its upper anterior surface the sinus pocularis. In color the veru is a pale pink, lighter than the surrounding mucous membrane of the urethra. It is rounded or oval in shape excepting the base, which is more flat. It is mostly composed of glandular and fibrous tissue and is covered with stratified squamous epithelium. The veru proper is composed of countless glands, all active. It is richly supplied with blood vessels and lymphatics, while the nerve supply is practically absent. The sinus pocularis is at times a well marked opening, while at others only a mere slit is noted.

The etiology of these conditions discloses some very interesting information. In our series of nearly 200 cases, only about 80 per cent gave the history of a preceding gonor-

*Read before the Kentucky State Medical Association, Louisville, September 21-23, 1915.



Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.



Fig. 6.



Fig. 7.



Fig. 8.

Fig. 1. Floor of the proximal portion of the supramontane region when this forms a valley surmounted by prominent side walls.

Fig. 2. Normal colliculus with prominent posterior frenula.

Fig. 3. Normal colliculus viewed from in front (distally), presenting summit and acclive.

Fig. 4. Normal colliculus with utricle and ejaculatory ducts.

Fig. 5. Normal colliculus with declive (above), and striking orbicular orifices.

Fig. 6. Pyramidal shaped colliculus with umbilicated utricle.

Fig. 7. Atypical colliculus with peculiar utricle.

Fig. 8. Junction of pendulous and bulbous urethra. The dark area is the non-illuminated bulb; the bright white portion below is the beginning of the floor of the pendulous urethra. If more illumination be employed the bulb would be clearly visible.



Fig. 9.



Fig. 10.



Fig. 11.



Fig. 12.



Fig. 13.



Fig. 14.



Fig. 15.



Fig. 16.

Fig. 9. Juxta-sphincteric portion of the trigone where the mucous membrane shows the continuation of the trigonal markings. Owing to the declination posteriorly, the upper part of the field becomes dark. Figure shows a very vascular mucous membrane.

Fig. 10. Normal sphincter; right margin.

Fig. 11. Left margin and part of the roof of the sphincter with reduplicated marginal fold.

Fig. 12. Juxta-sphincteric region to right of

median line, at the floor of the bladder in one type of cystitis colli.

Fig. 13. Papilloma at the left margin of the internal sphincter.

Fig. 14. Large (pathological) crypts in roof of pars supramontana with purulent contents.

Fig. 15. Solitary cyst at the roof of the internal sphincter.

Fig. 16. Small cysts in roof of the pars supramontana.



Fig. 17.



Fig. 18.



Fig. 19.



Fig. 20.

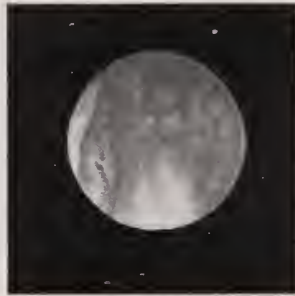


Fig. 21.



Fig. 22.



Fig. 23.



Fig. 24.

Fig. 17. Cyst on left side wall of prostatic urethra; knife is piercing the cyst; drawn with the knife in situ.

Fig. 18. Collection of cysts in the right margin of the internal sphincter.

Fig. 19. Conglomerate cysts in the left margin of the sphincter.

Fig. 20. Symmetrical cystic bodies at margin of roof of the sphincter. The cysts encroached upon the internal urethral orifice, obstructing it.

Fig. 21. Fossula prostatica. Above in the figure is seen the bulbous degeneration of the frenula; on the left, the deep cleft is an enlarged prostatic duct.

Fig. 22. Cystic degeneration of the colliculus.

Fig. 23. Turgid colliculus with irregular contour, in subacute urethritis.

Fig. 24. Inflammatory excrecences on the colliculus.



Fig. 25.



Fig. 26.



Fig. 27.



Fig. 28.



Fig. 29.



Fig. 30.



Fig. 31.



Fig. 32.

Fig. 25. Crater-like distortion of the summit of the colliculus, the result of chronic inflammation.

Fig. 26. Colliculus as seen without the telescope, with an endoscope light carrier.

Fig. 27. Left sulcus lateralis contains an oval scar. On the left in the figure, is seen the bulbous left margin of the enlarged, distorted colliculus; case of atrophy of left testicle.

Fig. 28. Enlarged prostatic duct in depressed scar tissue in the right sulcus lateralis; displaced and distorted colliculus.

Fig. 29. Papilloma arising from the summit of the colliculus; common variety at the usual site.

Fig. 30. Small papilloma lying against colliculus and arising by a slender pedicle from the foot of that body.

Fig. 31. Stricture of the bulbous urethra, showing a tear after dilatation to Charriere 24.

Fig. 32. Floor of the sphincter in hypertrophy of the prostate showing enlarged lateral lobes.

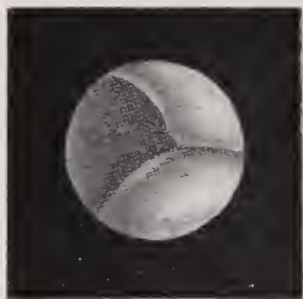


Fig. 33.



Fig. 34



Fig. 35.



Fig. 36.



Fig. 36.



Fig. 36.



Fig. 36.

Fig. 33. Left side of the sphincter in prostatic hypertrophy.

Fig. 34. Floor of pars supramontana in prostatic hypertrophy.

Fig. 35. Montane region in prostatic hypertrophy; note prostatic lobes and small colliculus.

Fig. 36. Series showing excavation left after perineal prostatectomy. Consecutive fields taking in the floor of the prostatic urethra are represented, beginning with number 36 as the field nearest the bladder.

rhea, 20 per cent were found in men with a negative venereal history. In the gonorrheal type a large majority had a complicating infection of the prostate and seminal vesicles, some singly and some both. Again quite a number was observed with a history of an infection years previously with absolutely clear urine, normal vesicles and prostate, with an enormous tender veru, together with resulting necrotic symptoms. In the acute or sub-acute infectious types the veru takes a many sided picture of pathologic changes. The *sinus popularis* in these cases is usually widely gaping, simulating closely the existing anatomical changes as attends the urethral orifices in a kidney infection. We are amazed upon the introduction of the endoscope into the urethra varying degrees of pathologic changes in the walls of the entire posterior urethra as well as the colliculus itself. At times the posterior urethra is slightly excoriated with areas of redness often covered with granulations and minute cysts that bleed readily on touch. At other times we see an intense oedema of the entire posterior urethra, making it rather difficult to introduce the smallest sized endoscope, but more often the entire area is engorged with a venous stasis, dense folds throughout, while the colliculus fills the entire picture, emphasizing the fact that an acute or sub-acute infection was or is localized in the verumontanum. The causes of these conditions are divided naturally into those giving a history of a previous infection and those with a negative venereal history. It is the cases with a negative venereal history that the best results are noted. These men complained usually of the usual symptoms, but examination disclosed the psychic phase to be a very serious complication. Interrogation and examination usually disclosed sexual excesses, suppressed desire, neoplasm, or masturbation; all were in part co-operating in disturbing the equilibrium of the veru. In neoplasm radical removal of the tumor by the high frequency current is always to be the method of choice. The tumors are usually small and one sparking is generally sufficient. Some confess abstinence through fear of infection, some because of a betrothal, while others confess masturbation. But at any rate, it is through the increasing and prolonged stimulation of the genital nerves, together with the blood supply, combined with mechanical insults, that causes the stasis, resulting in the engorged veru being continuously stimulated, causing the succeeding train of symptoms. In the local treatment it is understood, of course, that where the prostate and vesicles are at fault, treatment must naturally be directed there. It is not to be expected that local treatment applied to the veru can or

will cure a long standing infection of the prostate or vesicles. The open aid endoscope offers a very useful place in the treatment of these disorders, and while a great many drugs have been suggested, in my hands silver nitrate in varying solutions has been the agent par excellence. It has been my habit after thoroughly drying the veru and adjacent tissues with dry applicators to apply varying strengths of silver, either ten, twenty, thirty, or fifty per cent, as is tolerated by the patient. It is necessarily wise to suggest that the treatment is rather painful and the reaction from the silver at times rather severe, but with a proper selection of cases the solutions discriminately applied amazing results are usually obtained. It is my habit to apply them at weekly intervals over a period of more or less length of time. It is wise after the application of the silver to allow it to dry thoroughly, the excess is always to be removed, before the endoscope is withdrawn. We have noted very little inconvenience where this rule was observed. Many investigators have recorded numbers of epididymitis following this treatment. It is no doubt quite a serious contra-indication and one that is to be expected. We have so far in our series noted none of these sequelli. After the application of a particularly strong solution, say 50 per cent., it is necessary at times to follow with a bland oil such as petroleum, aboline or olive oil, to lessen the reaction. This has only been necessary in a few of our cases. In offering this very simple procedure I wish to impress that it is not my claim that every case of neurosis can be cured by such treatment. It has proven to my satisfaction that amazing results at times will be obtained, and, while some investigators, namely, Rytina, advise excision of the veru rather than a long continued use of cauterizing agents, nevertheless, the fact remains that the function of the veru while not well established is certainly a very important one in the normal sexual life, and, while theoretically topical applications are not to be depended upon to cure every patient, possibly the psychic influence has a decided phase in this treatment and maybe not. The fact remains, however, that in my series covering many classes of patients, with the usual endless string of symptoms, silver has given me all that was to be desired,—certainly much better than was to be hoped. Results are really after all what count.

CHRONIC PROSTATITIS.*

By HERBERT BRONNER, Louisville.

Involvement of the posterior urethra occurs in a very large percentage of cases of urethritis, according to some authorities as high as ninety per cent. By this it is not meant to infer that the patient has all the classical symptoms of posterior urethritis; in fact, some cases are so mild that the patient is not at all cognizant of the fact that the posterior urethra is affected, and the condition would be entirely overlooked were it not for the careful study of the urine by the observant clinician. In the course of many cases of urethritis, the second urine will be persistently cloudy for a number of days, and yet the patient have neither frequency of urination, pain, nor any other subjective symptoms.

Now, if the fact that posterior urethritis is such a frequent condition be carefully weighed, and the anatomy and histology of the prostate be carefully considered in conjunction with this fact, it can be readily understood why prostatitis is such a common complication of urethritis. It must be remembered that the prostate is a compound tubular gland, emptying, by twelve to twenty ducts, into the prostatic urethra. The epithelial lining of the glandular structure is of the same type as the urethra, and is directly continuous with it. The chances of involvement of the prostate, therefore, in inflammatory conditions of the urethra, are necessarily very great. Bierhoff, in a careful study of 299 cases of posterior urethritis, found the prostate involved in every case, and, according to Finger, Frank, von Frisch, Keyes, Clark, and many others, nearly every case of posterior urethritis is associated with prostatitis.

As the chief cause of posterior urethritis is gonorrhea, so the chief cause of prostatitis is gonorrhea. The importance of the study of this condition, therefore, becomes manifest when we consider that it is one of the commonest complications of gonorrheal urethritis, especially when we know the difficulty with which the organism is eradicated from the depths of the follicles of the gland.

The longer the writer studies chronic urethritis the more he becomes convinced that, where infiltration of the urethra can be eliminated as a cause, the chief factor in persistent urethral discharge and recurring attacks of urethritis is chronic prostatitis. Cases which had resisted all treatment, directed to the anterior urethra alone, for months or years, and more especially a large class of cases where the patients had complained of several so-called new infections with startling regularity,

were only permanently relieved when consistent and prolonged treatment was directed to the source of the trouble—a chronically infected prostate.

Casper, in an examination of 100 cases of of chronic urethritis, found the prostate inflamed in 85 per cent of the cases.

Christian says that all chronic gonorrhea is found in the prostate, and believes that, in 75 or 80 per cent of chronic urethral discharge, there is prostatic involvement.

M. V. Zeissel is of the opinion that chronic prostatitis is almost always found in chronic gonorrhea.

Bierhoff states that in 85 per cent. of cases of chronic gonorrhea, it was found that the gonorrhea was due to involvement of the prostate. Keyes, Jr. makes the statement that chronic posterior urethritis is clinically synonymous with chronic follicular prostatitis, and, therefore, treats posterior urethritis under the head of chronic prostatitis.

Leedham-Green states that it will not be overstating the case to affirm that prostatitis is more commonly present than absent in all cases of urethritis of more than three month's duration.

Waelsch found prostatitis in 81 per cent of cases; Lewis, Wolbarst, Chetwood, Valentine, Finger, Young, and others, in a very high percentage of cases.

We believe that enough corroborative evidence has been brought forth to show the frequency with which chronic prostatitis is found in chronic urethral conditions.

Where physicians fail to find involvement of the gland, it may be due to various causes. In the first place, some men fail to find trouble in the gland because they never make a systematic examination of this organ. Again some think that a history of an acute attack of prostatitis is essential; quite the reverse is the fact. Most cases of chronic prostatitis fail to give a history of a decided attack of acute prostatitis, and a careful study will show that the disease has come on slowly and insidiously, in many cases it being difficult for the physician to convince the patient that the gland is the cause of certain symptoms. Again, too many physicians, in making a diagnosis, depend upon decided changes in the gland as felt by rectal palpation. The fallacy of this is demonstrated by the very interesting work of De Santos Saxe, who showed that, in his cases, 35 per cent gave no palpatory signs. Again, some physicians fail to recognize prostatitis because they believe that prostaticorrhea is essential to the diagnosis of the disease. We know, however, that this symptom is frequently not found. The fact is that prostaticorrhea is as often found in men where a prostatitis is absent. Lastly some physicians fail to

*Read before the Kentucky State Medical Association, Louisville, September 21-23, 1915.

find prostatitis because they depend too much upon examination of the urine as voided by the patient. Now, if anterior discharge is the symptom, the second urine is clear; or, if it be one of those cases where discharge is not present, both urines may be clear and sparkling. In these very cases, however, the massage urine will be found full of pus, bacteria and other findings which we will detail later.

The older the infection the more likelihood of finding the prostate involved. Saxe finds that whereas prostatitis occurred in 53 per cent. of cases where the infection had only lasted from six months to one year, there were 77 per cent. of prostatitis in infections of over two years' standing.

Young, Geraghty and Stevens, in a study of 358 cases, show that no etiology was obtainable in 53 cases, 14.8 per cent.; a history of gonorrhea in 262, 73.2 per cent.; of masturbation in 27, 7.1-2 per cent.; of prolonged sexual excitement (without coitus) in four cases, and withdrawal in three cases, 2 per cent.; of descending infection in three cases, .8 per cent.; of instrumentation in two cases, .6 per cent.; of infectious diseases (grippe) in one case, .3 per cent.

It will be seen that gonorrhea was the original cause in 73 per cent. of cases in this series. While in most of the cases that the writer has seen, gonorrhea was the etiological factor, there has been a fairly good proportion of cases where abnormal sexuality was the chief etiological factor. But, while gonorrhea is the prime cause of prostatitis, it must not be supposed that the gonococcus is still found in all cases where the secretion is examined. This brings us to the very interesting study of the bacteriological findings in chronic prostatitis.

We have found the gonococcus alone in a few cases, but more often accompanied by other organisms, especially the staphylococcus. The staphylococcus was found alone in a number of cases, and bacilli, gram-positive diplococci, and rarer organisms, in a few cases. The older the condition the less likelihood of findings the gonococcus. On the other hand, the older the prostatitis the more likelihood of finding mixed infection. Frank claims to have found the gonococcus in 85 per cent. of cases; Bierhoff in 84 per cent. of cases. It is quite likely that this high percentage of positive findings is due to the fact that these men included very early cases in their examinations, because their findings are at decided variance with those of many other clinicians. Notthafft found the gonococcus forty-seven times in one hundred and twenty cases of prostatitis, a percentage of 39.2. He found micrococci 119 times, bacilli fifteen times, and other bacteria fourteen times. Notthafft's figures are very instructive, in

that they show the rapidity with which the percentage of positive findings of gonococci decreased with the chronicity of the infection. The gonococcus was found, either alone or with other bacteria, in 73 per cent. of cases seen within six to twelve months after the last infection; in 50 per cent. of those seen within twelve to eighteen months; in eighteen per cent. of those seen within twenty-four to thirty-six months. He found no gonococci after the third year.

De Santos Saxe, in a very careful and comprehensive study of 108 cases, found the gonococcus in thirty-one cases, that is, 28.7 per cent. Of these cases only five showed the gonococcus alone. Mixed infection, on the other hand, occurred in 86 per cent. of the cases examined. The staphylococcus occurred in 74 per cent. of the cases; bacilli (chiefly colon bacilli) in 28 per cent.; gram-positive diplococci in ten per cent.; streptococci in 7.6 per cent. and unclassified germs in 6.5 per cent. It will be seen that the staphylococcus is the germ most frequently found in the very chronic cases of prostatitis. In these cases the examination of the ordinary massage fluid may not disclose the gonococcus, but an examination of the fluid following a provocative injection of silver nitrate will be more successful.

PATHOLOGY.

The prostate is made up of glandular structures and a stroma composed of muscular tissue and a small amount of connective tissue. While an attempt has been made to divide cases, according to their pathology, into follicular and interstitial types, we know that in reality both the follicles and the periacinous tissue will be found involved in all cases. Sometimes the follicles are found greatly distended with pus and desquamated epithelium, more especially when the openings of the ducts are occluded. In these cases the follicles often become cystic in character, or take on the appearance of small abscesses. On the other hand, the acini may be much lessened in caliber or practically destroyed by the extensive new fibrous tissue formation in the periacinous structure. Sometimes the walls of the ducts are so infiltrated with fibrous tissue that they lose their tonicity, explaining the ease with which prostatic secretion finds its way into the urethra in some cases. A knowledge of the pathology will explain the various findings per rectum. In those cases where a generalized swelling and enlargement of the gland is found, the glandular structure in its entirety is involved. In those cases where the gland feels lumpy and nodular, isolated groups of follicles are swollen and perhaps cystic. Again, where the gland is very hard, indurated and perhaps atrophic in cer-

tain areas, it is because there has been a deposit of fibrous tissue formation. These various pathological conditions may be unevenly distributed throughout the gland, one part being normal, another showing decided involvement of the glandular or interstitial tissue.

SYMPTOMATOLOGY.

When it is remembered that the prostate gland surrounds the urethra, that it is in close relationship anatomically, with the bladder, rectum, seminal vesicles, ureter, and vasa deferentia, that it takes a most important part in the sexual act and in urination, that it has a very elaborate nerve supply, there should be no wonder that the symptomatology of the disease is varied and often complex.

Taylor divided the disease, according to symptoms, into those cases occurring in men under thirty and those over thirty. His reason for doing so was that he found sexual symptoms predominating in the younger men, while urinary and referred symptoms were more pronounced in the older men. On the whole, the best classification is into (1) urinary, (2) sexual, and (3) referred.

In some cases there are absolutely no symptoms. This is the class of cases which are often discovered by the physician in the examination of candidates for marriage. Quite recently we saw two patients, neither of whom had a symptom; yet the prostatic secretion was full of pus and showed gonococci on culture. This is the most dangerous class of cases, the type that infects the young wife when the dormant gonococcus is transferred to a virgin soil.

In many cases the only symptom complained of is persistent urethral discharge, or annoying recurrence of discharge without a history of fresh exposure. Frequency of urination during the day-time and especially at night, may be the complaint. Pain at the beginning, during or at the end of urination; slow or difficult urination and hesitancy in beginning the stream; urgency and dribbling at the end of urination, are other manifestations. The urinary act is a very complex one, and for its proper performance relaxation of the sphincters, the fibres of which are derived largely from the prostate must occur simultaneously with the contraction of the detrusor muscle. Now, in chronic inflammation of the gland, the pressure of the exudate on the nerve endings produces an interference with the proper co-ordination of these different muscles, as the result of which some of the symptoms detailed above occur. A very interesting class of cases are those where residual urine exists. Residual urine occurring in young men, where no stricture or spinal lesion can be found, should always warrant an

examination of the prostate. In these cases a decided median bar, with contracture of the bladder neck is usually found. These patients have the symptoms of prostatic hypertrophy without true hypertrophy of the gland. This class of cases is sometimes not benefitted by ordinary methods of treatment and requires operative procedure to effect a cure.

SEXUAL SYMPTOMS.

The prostate gland is essentially a sexual organ, its urinary function being of only secondary importance. It has aptly been called the "sexual heart." In its capacity as a sexual organ, it has a three-fold function, motor, sensory and secretory. By means of its well developed muscular structures it opens the ejaculatory ducts and throws its own secretion into the urethra. It manufactures a secretion which is absolutely necessary to render the spermatozoa motile; and, lastly, the prostate gland, with the verumontanum, is the seat of sensation during orgasm. We are prepared for Taylor's statement that by far the most frequent cause of sexual weakness and impotence is chronic prostatitis. As a result of the pathological condition of the gland, some of the tubes are destroyed, or others are so altered that the secretory function is profoundly disturbed. Again, the pathological condition may exert some influence on the terminal filaments of the pudic nerve and thus affect the power of erection. In some cases of prostatitis the only symptoms complained of are sexual in character, and it is difficult to make the patient believe that the prostate is the source of the trouble. There may be partial or complete impotence, loss of desire, feeble erections or complete absence of erections, premature ejaculation, frequent nocturnal emissions and prostaticorrhea. In these cases there is frequently an inflammation of the seminal vesicles and an involvement of the verumontanum. Our observation, in this respect, corroborates that of Morton and Young. That colliculitis should frequently accompany prostatitis should not be surprising when one remembers the close anatomical relationship of the prostate and the veru and when one considers that the same etiological factors produce both. Young puts it well when he says, "The symptoms produced by pathologic conditions of the colliculus are so wrapped up with those of chronic prostatitis and vesiculitis that it is often impossible to separate them." When there is painful and blood ejaculation, a decided seminal vesiculitis will usually be found and the fluid will contain lifeless spermatozoa. Sterility may be caused by prostatitis in one of two ways—the secretion may be so altered that it no longer serves to render the sperma-

tozoa motile; or, as a result of the inflammatory exudate, there may be occlusion of the ejaculatory ducts resulting in aspermatisim. Patients suffering with sexual symptoms are often neurasthenic and are prone to go from bad to worse unless relieved by proper treatment.

REFERRED SYMPTOMS.

The prostate gland receives its sympathetic fibres from the hypogastric plexus, and its sensory spinal fibers from the pudic nerve. According to Bryant, the terminal filaments of the sensory fibres in the prostate are endowed with genital corpuscles, or the end-bulbs of Kraus. Young states that he has found, beneath the dense tissue of the capsule of the prostate, numerous nerve bundles, containing large numbers of ganglion cells. Viktor Blum states that there are, in the periprostatic tissue surrounding the true capsule, many corpuscles similar to the end-bulbs of Kraus. An organ, which is so richly supplied with nerve tissue and one which is necessarily so susceptible to sensory impressions, must exert a great influence on the individual when diseased. In explanation of referred symptoms Bryant states that impressions, whether due to the presence of inflammatory exudate, or some other cause are conveyed to the cord, and by a psychic error are felt in the terminal filaments of the nerves going to the surface of the body, which arises from the same spinal segments as the pudic. In other words, the condition is based upon the intimate relation which exists between the roots of the pudic with the roots of the nerves supplying the various parts of the body to which these pains are referred. As the pudic nerve receives its fibres from the tenth, eleventh and twelfth dorsal, the fifth lumbar, and the first, second and third sacral, it can be readily understood how the referred pains may be very extensive and involve an area from "the diaphragm to the feet." Thus, anal pruritus can be explained through the relation existing between the roots of the pudic nerve and the inferior hemorrhoidal; pain and burning sensation in the perineum through relation with the roots of the perineal, etc.

The commonest referred symptom is pain in the lumbar region, a condition often misdiagnosed as lumbago. There may be pain in the suprapubic area; in the groin; in the testicle; along the cord; along the urethra, sometimes referred to the glans penis; in the thigh, simulating sciatica; in the hips or in the sacrum.

Rectal symptoms are often found, and may consist of a sense of fullness, itching, burning, or pain, especially during certain forms of exercise, as bicycling, or in others when seated on the edge of a chair, or on crossing the legs.

Pain in the scrotum or along the cord will be found with no involvement of these organs. The writer had one case which simulated renal colic—dull pain in the kidney area with acute exacerbations of the pain, and some frequency of urination, were among other symptoms. Treatment directed to the prostate cleared up the condition. Young reports ten cases of this kind, in six of which an operation had been performed without finding a calculus. In many of these cases where referred symptoms are prominent, a decided involvement of both prostate and seminal vesicles will be found, with extensive adhesions to the pelvic wall.

DIAGNOSIS.

The previous history of the case, taken in conjunction with the symptoms, will make the diagnosis highly suggestive, but positive diagnosis can only be made by rectal palpation and an examination of the prostatic secretion. Upon examination per rectum, an enlargement of the entire gland may be found, or sometimes only one lobe. In either case, the structure may feel soft and boggy, in which case abundant secretion is expressed on massage, or hard and resistant. Again, the gland may be distinctly lumpy and nodular in certain areas, or it may impart the sensation as if studded with shot-like prominences. In old cases the gland may be very hard, indurated, much distorted and atrophic. In some cases the gland is exquisitely sensitive, the patient crying out with pain at the slightest contact of the examining finger. In other cases tenderness is not a decided feature. Again, there may be pain and tenderness only in certain nodular and indurated areas.

In a certain number of cases, no changes are found upon rectal examination although the gland is the seat of chronic inflammation. The importance of examination of the prostatic secretion, therefore, becomes manifest. The normal prostatic secretion is an opalescent, grayish-white, alkaline fluid, whose chief constituents are phosphates, lecithin bodies, cylindrical and round epithelial cells, and a few corpora amylacea. When the prostate is diseased, the secretion looks decidedly purulent in character. The chief ingredients then are pus, bacteria, and an excess of granular phosphates. Robert Taylor lays great stress upon the presence of an excess of phosphates as a diagnostic feature, and we have never failed to find them in these cases. The most important finding, however, is pus. When urethral and bladder contamination can be eliminated by proper precautions, and the secretion appearing at the meatus after massage contains pus, the diagnosis of prostatitis is positive. Rarer findings, especially in the older cases, are hyaline cylinders and phos-

phatic concretions. It must be remembered that very frequently the secretion obtained from the first few massages will fail to disclose much pus while that from later attempts will show pus in abundance.

By means of the cysto-urethroscope of either the Buerger or Goldschmidt type, certain lesions in the vicinity of the sphincter and urethra will be noted. The sphincteric margin instead of being clear-cut and concave in outline, may be hyperemic and granular. In some cases the margin is irregular in outline and may even show some convexity. In obstructive prostatitis, a definite median bar with elevation of the trigone is seen and there may be some trabeculation of the bladder as in true hypertrophy. In the urethra a bulging of the lateral lobes may be noted. The openings of the prostatic ducts may show definite pathology, reminding one, somewhat, of the glands of Littre in the anterior urethra. The verumontanum frequently shows various pathological changes. It may be very much enlarged or granular, bleeding easily. At times there are excrescences or even definite papillomata, especially near the summit. There may be a cystic degeneration of the veru with similar cysts on the roof and sphincteric margin. In the very old cases of prostatitis, the veru may have become atrophic in which case it looks pale, misshapen and distorted.

There may also be decided changes in the prostatic utricle and the openings of the ejaculatory ducts.

TREATMENT.

The treatment of chronic prostatitis is at best a difficult task. One of the chief reasons for this is that the patient is usually ignorant of the profound pathology which exists and therefore cannot understand the necessity for prolonged observation and is prone to become dissatisfied and stop treatment too soon. We believe that it is a good rule in all these cases to acquaint the patient with the nature of his condition in as clear a manner as possible so that he may comprehend why prolonged and persistent treatment is essential to obtain results and so that he may co-operate as much as possible.

The patient's general condition should be brought up to the best possible standard. In order to accomplish this, indications will have to be met as they arise. Where there are symptoms of posterior urethritis (Young found urethritis 196 times in a series of 358 cases of chronic prostatitis) the usual treatment of chronic posterior urethritis should be employed. Irrigations or instillations may be used. In these cases our preference is for silver nitrate, beginning with a one to ten thousand irrigation by gravity and gradually

increasing the strength of solution. Instillation is performed with the Keyes instillator, beginning with a quarter per cent silver nitrate and again gradually increasing the strength of the solution. Dilatation of the urethra with sounds or the Kollman dilator are beneficial when used judiciously. These dilatations are especially helpful in opening up the prostatic ducts and absorbing the infiltrations around the orifices.

In cases where the verumontanum is affected especial attention should be given to the treatment of this structure. Direct applications of twenty-five per cent. silver nitrate through an endoscope every seven to ten days are often beneficial. In obstinate cases we have used the high frequency current with good results. Rytina and Hawkins recommend the radical removal of the veru in selected cases.

In those cases with marked sexual symptoms, in addition to the treatment of the veru, the use of large cold sounds or of the psychophore with cold water running through it, should be remembered.

Of those measures directed to the prostate proper, the most serviceable is massage. In the use of prostatic massage no hard and fast rules can be laid down; the surgeon will have to use his judgment as to the best procedure in the individual case. In most cases massage should not be given more often than every three or four days. Yet there are cases which are benefitted by massage every other day, again there are cases where the reaction is such that a weekly interval is better. The amount of pressure to be exerted and the length of each massage must also vary with the type of case and with the individual. Even in the same gland the surgeon soon learns that certain areas require a difference in the nature of the manipulations in order to obtain results. Massage should be performed with the bladder containing a few ounces of urine or antiseptic fluid and should be followed by antiseptic irrigation. By the latter procedure the tendency to the lighting up of an acute process is markedly diminished although this may happen occasionally in spite of all precautions. The response to massage in some cases is almost phenomenal, making us at times feel that part of the affect must be psychic. All of us have had patients state that they could feel the good results in a few hours. It is especially in the neurasthenic type that marked results are sometimes obtained. The length of time that massage should be carried on will depend on the clinical results, the examination of the expressed fluid, and the findings on rectal examination.

Hot rectal irrigations are beneficial in the chronic cases of prostatitis just as they are in

the acute cases and where it is feasible, this measure may be adopted.

Since infection is found in chronic prostatitis, it was, only natural that vaccine therapy would be used in these cases. We believe that vaccines should be given a trial in these cases it being distinctly understood that the vaccine is used only as an adjuvant to the local treatment. Since a mixed infection is found in most cases of chronic prostatitis, we prefer a carefully prepared autogenous vaccine to the stock vaccine.

While the treatment outlined above will obtain results in a majority of cases, there remains a small group of cases where more radical measures are necessary. We refer to the class of cases where there is definite obstruction in the form of a median bar or sphincteric stenosis due to a long-standing atrophic prostatitis. We believe that in these cases the patient should first have the benefit of ordinary treatment—massage, high dilatation, etc., but if after a fair trial results are not forthcoming, a more radical procedure should be advised.

The methods which may be employed are (1) deep incision of the bar or removal of a V-shaped piece, with stretching of the internal sphincter; (2) perineal galvano-prostatotomy after the method of Chetwood; (3) galvano-prostatotomy after the method of Goldschmidt; (4) Young's punch operation; (5) destroying the obstructing tissue with the high frequency current; (6) prostatectomy.

Chetwood and Keyes have reported a large series of cases where obstructive prostatitis has been relieved by the galvano-cautery used through a perineal incision, although a possible complication from this operation is incontinence.

Young has also reported a large series of splendid results obtained by means of his ingenious punch operation. One of the chief objections to this procedure is hemorrhage.

Personally, we have been much interested in the use of the high frequency current in the treatment of small median bars and contractures. Bugbee and Stevens were among the first to suggest this method. The technique is the same as that for bladder tumors. The method has several advantages—the work is done under direct observation; the procedure can be carried out in the office; the hemorrhage is usually slight. We believe that the method merits a trial.

There remains a very small group of cases where possibly nothing short of prostatectomy will avail. Young has found perineal prostatectomy necessary in some few cases where all other forms of treatment have been used and where the patient's symptoms have become unbearable.

CONCLUSIONS.

1. Chronic prostatitis is a common condition.
2. It is one of the chief causes of persistent urethritis and recurring attacks of urethritis.
3. The gonococcus may be found in the prostate for a number of years; the older the infection the less likelihood of finding the gonococci and the more likelihood of finding a mixed infection.
4. The symptomatology of prostatitis, by reason of the anatomical location of the gland, its two-fold function and its rich nerve supply, is varied.
5. The examination of the urine as voided by the patient is not helpful in diagnosis. The urine may be clear and yet, after massage be filled with pus and bacteria.
6. The two most important aids in diagnosis are, examination per rectum, and especially, thorough examination of the expressed secretion.
7. While non-surgical treatment is beneficial in the great majority of cases, there is a certain group of cases, chiefly characterized by obstructive symptoms, which require some operative procedure to affect a cure.

DISCUSSION.

H. J. McKenna, Louisville: While I am not familiar with the exact type of chronic prostatitis described by Dr. Bronner, as it is the one that is most frequently seen by the genito-urinary specialist, it, however, leads in later life, as a rule, to a different type of chronic prostatitis, or rather to two different types, one of which is the chronic lobular prostatitis, and generally known as hypertrophic prostate. This type, as has been shown by Tandler and Zurkerkandl, mostly involves the median lobe of the prostate and I think their conclusions have been corroborated by other observers. For instance, Wilson and MacCarty have agreed with Tandler and Zurkerkandl that the median lobe is the one most frequently involved.

There is another type of chronic prostatitis, the so-called chronic interstitial prostatitis, it being ordinarily an atrophic prostate, and it also involves to some extent the median lobe insofar as it is called a median bar in this type. We should not confuse a median lobe enlargement with a median bar because they are entirely different, being different in pathology and in appearance through the cystoscope, and most important of all are treated differently. The median bar is a type that can be treated, as Dr. Bronner has well said, by various methods, notably by the Young punch and high frequency current. That is the median bar type or the chronic interstitial prostatitis; whereas the chronic lobular prostatitis or hypertrophic prostate is one that should be treated only by prostatectomy, because it cannot

be punched out with the Young punch. The whole lobe is involved. It rises in front of the cystoscope like a spirical mass almost, but the median bar is nothing but a fibrous bar extending across the lateral lobes where the median lobe lies. Where the median bar exists it can be punched out or tunnelled through with the aid of the high frequency current.

PUBLIC HEALTH.*

By J. G. FOLEY, Pineville.

"Public Health" has been assigned to me by your committee as a subject on which to prepare and read a paper. This, like most all other public affairs is everybody's business, and it is generally understood that everybody's business is nobody's business.

No one believes in it, believes anything that is said or done about it, and no one cares to share any of the responsibilities.

But the day is here when not only the medical profession but the public as well realize that some definite plan must be adopted, and put in force if the American people are to continue to be a strong self-supporting and prosperous people, and this is due to the fact that we are beginning to inaugurate in the United States a system of statistics whereby we can find out how many of our people are dying annually and from what causes.

When we begin to study these statistics they become both interesting and sad. Interesting from the information we get, and sad because we find that so many of our people and especially young people are dying from preventable diseases.

We have in the United States 500,000 cases of typhoid fever annually, with 50,000 deaths, one-third of all the people dying in the United States between the ages of 20 and 35 years, die from typhoid fever.

We have annually 250,000 deaths from tuberculosis, which means that we still have 750,000 living among us who are suffering from the disease and a majority of them spreading the disease.

The United States loses annually 50,000 children from what is commonly known as bowel trouble. These losses are awful and appalling to think about when we figure them up and find they make a grand total of 350,000 deaths annually in the United States from only three diseases. This is leaving off the long list of deaths from measles, whooping cough, pellagra and hookworm and other diseases.

Why is it that this great country has and continues to have such a death list from pre-

ventable diseases? I have given this question quite a little study, and it seems to me that we have three main causes namely: Lack of knowledge, confidence and energy.

The first or lack of knowledge in my judgment is the greatest field we have, it is not only the general public or the illiterate that does not know or fully realize the many different ways and places from which we get these different infections, but the medical profession as well, and as a class I believe they know less about it and give it less time thought and concern than any other class of people.

It would be out of place to begin to enumerate the different sources of infections, as it would take volumes instead of a paper and then some, but I will only briefly mention two. The house fly and the closet. The house fly, or in more appropriate language the typhoid fly, is one of our greatest spreaders of diseases of different kinds as he goes into everything and then on to everything we have to eat.

The closet in this section of the country plays a part that people don't think of. In fact the people don't seem to know what the real intention of a closet is. They seem to think it is just a place to shut off the view from the public instead of a place for excrement to be deposited and destroyed. They soil the seats and get on them with their feet, soil up the floors in fact the closets get into such a condition that you cannot go into them without getting your shoes soiled; then this material is carried in the house and bye and bye it is deposited on the floors, carpets and rugs, and the baby is given a piece of bread, a cake or candy, which it drops on the floor and this food as it is intended gathers up with it this material from the closet and instead of getting food gets his death, no doubt in my mind that this happens in many homes that have good sanitary flush closets in them, but the servants and runners in bring in this material from the nasty, filthy closets they use.

Thus it is our homes, no difference how well they are kept, are no safer than the sanitary service and accommodations of our neighbors and servants. "No chain is stronger than its weakest link."

CONFIDENCE

There is no question but what the American people and especially the mountain people are great doubters, all "from Missonri," so to speak, want to be shown and, as a rule, prefer to be shown by some charlatan or ignoramus.

These conditions are brought about in the medical world by lack of honesty and good faith on the part of some of the medical profession. Take for instance the two

*Read before the Bell County Medical Society.

diseases, Pellagra and tuberculosis. The country is full of physicians to-day, men of good sense and education both literary and professional, but without the proper honesty, honor and dignity that belongs to the medical profession who are telling these unfortunate people to-day that they can cure them and cure them with medicine and are dosing them with all kinds of nostrums and nasty stuff that would make a well man sick, yet bye and bye the victim drops off just as others have done who have not had the dollar to get the cure all, and thus confidence is gone to all.

ENERGY

This is the force that America is dying for lack of and especially the south, and bringing it closer home to Kentucky, and the mountains of Kentucky. Energy is what it takes to put the flour in the biscuit, the juice in the watermelon, the sour in the pickle, the smell in the onion, the salt in the ham, to make sanitary conditions better, clean up the house, yard, alleys and streets, and put in sewers, Kentucky sanitary vaults, haul off the manure and spread it on the gardens and fields to make comfortable homes filled with well, strong, happy, prosperous people.

The putting of all these measures forcibly, earnestly and effectively before the people is a much larger task than any one would think until he has tried it. The song says "it's a long way to Tipperary." Just so, and it is a long way around Bell county, and while you are going around it you don't get in touch with the ones that need it most. The county board intends to have the schools visited as early in the term as possible and all the children examined for defects as best we can, have sanitary talks made, have plain talks made at all of the country churches that it is possible to reach and in this way we hope bye and bye to reach a majority of the people of the county.

Unilateral Hernia—Charleton Dederer, Los Angeles (Journal A. M. A., Feb. 5, 1916), reports a case of double unilateral hernia, both direct and indirect, each sac about 1 1-2 by 1 1-4 inches in dimension. The direct sac was the one first diagnosed; the second was easily found by separating the fibers of the cremasteric fascia from the cord. The case, he thinks, illustrates the desirability, in cases in which there is an apparent general weakness in the inguinal region, of making search for both a direct and indirect hernia on the same side. It has been remarked, he says, that when recurrences follow a Bassini operation they are generally direct hernias and he thinks that if careful search had been made at the time of the first operation a second rupture might have been discovered in some cases and a larger percentage of cures obtained.

NEWS ITEMS AND COMMENTS

QUININE FAMINE FEARED.

If the European war continues much longer, where are the people of the United States to get their usual supply of quinine? At the breaking out of the war sulphate of quinine was selling at about 20 cents an ounce, wholesale. A year ago it sold for 40 cents; to-day it is selling at \$1.50 an ounce. When it is stated that during the fiscal year ending June 30, 1914, the last normal year prior to the war, the United States imported nearly 3,000,000 ounces of sulphate of quinine, then valued at about \$650,000, and over 3,648,000 pounds of cinchona bark, valued at \$464,000, it may be seen what such a difference in price may mean to the country.

Great Britain controls the cinchona bark industry in her possessions of India, Ceylon and Jamaica, and Holland the product of Java, and these are the sections of the world which have been furnishing practically its supply of quinine, in the form of cinchona bark, for the last thirty or thirty-five years. Great Britain is carefully husbanding the supply for the use of her armies and those of her allies, while the Dutch must be depended upon to supply those of the central powers. Armies in the field need a vastly larger supply of quinine than would the same number of men in ordinary occupations hence a quinine famine is feared for the rest of the world.

Time was when certain countries of South America, where the cinchona trees originated, supplied the world, and the story of quinine and how it was introduced into Europe is told by Edward Albes in the current number of the Bulletin of the Pan-American Union.

Once upon a time—278 years ago, to be more exact—in her viceregal castle in Lima, Peru, a lady lay ill of a fever. She was the Countess Ana, wife of the fourth count of Chinchon, who at the time was viceroy of Peru. News of the lady's illness having reached one Don Juan Lopez de Camizares, the Spanish corregidor of Loxa, who dwelt some 230 miles south of Quito, in what is now the republic of Ecuador, he dispatched a parcel of a certain kind of powdered bark to her physician, Juan de Vega, with the assurance that it was a sovereign remedy and a never failing specific in cases of intermitten fever. He knew this to be true from both experience and observation, for about eight years prior to this event he had suffered from a severe attack of fever, and had been cured by an old Indian of Malaeotas, who had thus revealed the remarkable properties of this bark. Since then he had observed its effects in many other cases. The remedy was tried and the countess was cured. The name given by the aborigines to the tree on which grew this wonderful bark was "quina-quina."

In 1649 the count of Chinchon returned to

Spain with his wife. She took with her a quantity of the healing bark, and thus was the first person to introduce it into Europe. Subsequently, some of the Jesuit missionaries in Brazil sent parcels of the powdered bark to Rome, whence it was distributed by the Cardinal de Lugo to other members of the fraternity throughout Europe. It was, therefore, often called Jesuits' bark and sometimes Cardinal's bark. Something over 100 years after the countess of Chinchon had introduced it into Spain, Linnaeus, the great Swedish botanist, in making his classification of all known trees and plants, to commemorate the service rendered to mankind by that lady, named the genus which yields the bark cinchona, and subsequently still further immortalized the name by giving it to the great family of trees and plants now known as the Chinchonaceae, which includes not only the Chinchonae, but also the ipecacuanhas and the coffees.

In their native habitat, in Peru, Ecuador, Bolivia and Colombia, the trees flourish in a cool and equable temperature, on the slopes and in the valleys and ravines of the mountains, surrounded by the most majestic scenery, never descending below an elevation of 2,500, and ascending as high as 9,000 feet above the sea. When in good soil and under favorable circumstances, they become large forest trees; on the higher elevations and when crowded and growing in rocky ground, they frequently run up to great heights without a branch; and at the upper limit of their zone they become mere scrubs. The leaves in the finest species are lanceolate, with a shining surface of bright green, traversed by crimson veins, and petioles of the same color. The flowers are small and hang in clustering panicles, like lilacs, generally of a deep roseate color, paler near the stalk, dark crimson within the tube, with curly hairs bordering the laciniae of the corolla, and give forth a delicious fragrance.

About fifty-five years ago, Sir Clements Markham, the English scientist and traveler, succeeded in getting a quantity of seeds and plants of the various valuable species of the cinchonaceae, which were taken to India for the purpose of starting cinchona plantations. Marked success followed the experiment, and subsequently plantations were started in Ceylon and Jamaica. The Dutch were successful in their efforts in Java. The plantation product drove out the forest product from the world's markets—and the world has depended upon those countries to supply it.

Dr. J. K. Castle, dean of the Kentucky Experiment Station, was the principal speaker before the monthly meeting of the Fayette Medical Society at the Phoenix Hotel, taking for his subject: "Recent Animal Nutrition and Growth." Dr. Kastle said in part:

"For a long time but little was known concerning the proteins except that they were com-

plex compounds of carbon, hydrogen, oxygen and nitrogen, containing also sometimes sulphur and phosphorus. Recently, however, many proteins have been obtained in pure crystalline condition, and by the action of ferments and acids these proteins have been resolved into various amido-acids.

"The nutritive value of various pure proteins has also been the subject of exhaustive investigations. It has been shown that certain of these such as the case in lactalbumin of milk, the edestin of hemp seed and others have the power of promoting the growth of young animals, whereas other pure proteins, such as the hordein of barley and the zein of maize, are powerless to promote growth.

"It has also been proven as a result of these investigations that a number of natural fats sustain an important relation to the young growing animal. Thus, it has been shown that butter fat, the fat of the egg yolk, cod liver oil and beef fat are fats that promote and stimulate growth under certain conditions, whereas almond oil and lard are powerless to promote the growth of the young animal. In this connection it is of interest to note that butter, the yolk of the egg and cod liver oil have long found extensive application in the dietaries of those suffering from certain wasting diseases."

These ideas have recently been applied by Messrs. Buckner, Nollau and Kastle to the study of the composition of various commercial feeding stuffs and common sources of protein, and also in the very interesting studies on the feeding of young chicks. On mash and grain mixtures containing quantities of lysine, young chicks have been found to thrive and grow actively from week to week, whereas on mash and grain mixtures, young chicks have failed to make a normal growth.

RESOLUTION ADOPTED UPON THE DEATH OF DR. AP MORGAN VANCE BY THE JEFFERSON COUNTY MEDICAL SOCIETY.

Resolved, That in the death of Dr. Ap Morgan Vance this Society has lost an earnest worker, a willing counsellor, a true man, a good doctor and a surgeon of unusual merit.

The community has lost a man whose acts and deeds were examples of honesty, righteousness and sincerity.

JNO. J. MOREN,
IRVIN ABELL,
J. R. MORRISON,

Committee.

After taking the oath of office, as administered by Mayor J. C. Rogers, the new Board of Health of Lexington was organized by the unanimous reelection of Dr. W. O. Bullock, as president. The nomination of Dr. Bullock was made by Prof. R. M. Allen in a strong speech in which he paid a glowing tribute to Dr. Bullock's splendid services as head of the health department under the administration of Mayor J. E. Cassidy. Those in attendance at the meeting were Drs. W. O. Bullock, J. C. Carriek, F. H. Clarke, M. S. Davis, John D. Maguire, Prof. R. M. Allen and Mayor J. C. Rogers.

It was also decided at the meeting to recommend the appointment of one colored city physician to look after colored patients who are unable to pay for medical treatment. Dr. J. K. Polk, who resides at 166 Dewees street, is tipped for this appointment. There was no election of health officer or other employes of the health department at the session, action on these matters being postponed.

Reports of Dr. Simmons on the condition of the milk and water supply of the city were read, but will be incorporated officially into the report of the health officer at a special meeting of the Board of Health next Friday night.

The meeting Friday is called to give special attention to the budget for the year and members of the board are instructed to give special attention to the subject and to study the needs of the department before that time. It is understood that the Health Officer and other employes of the health department will be selected at this meeting also.

Dr. Botkin, who recently removed from Berea, is contemplating establishing a hospital in Hazard, and has made considerable progress with his arrangements to that end. Getting a hospital here has occupied a prominent place in the thoughts of our people here in Hazard for more than three years. Lack of ability to finance the venture, on the part of our local physicians and citizens has alone stood in the way of starting a hospital here since the need for it was first realized. Dr. Botkin is in position to finance it, and has given the past two weeks exclusively to preparatory work and study for the hospital practice.

He will give his entire attention to the hospital work, and will thus not interfere with the established practice of the local physicians. The present plan is to start out with adequate equipment for taking care of all operations, and at the first of next year to enlarge all facilities sufficiently to take care of all classes of hospital work. Most of the operators in this vicinity have signified their desire to co-operate with Dr. Botkin in establishing a hospital and making a success. Securing means for quick and adequate attention to patients in cases of various accidents will be of incalculable benefit on every hand.

The people here will certainly help and encour-

age this undertaking in every way possible, as it will be a step forward of utmost importance to Hazard as well as the entire county. The news that a hospital seems at last so near actual realization will be welcomed gladly throughout this entire section, including adjoining counties.

The New York Medical Record publishes an article on "The Tobacco Habit," by Dr. Robert Abbe, the senior surgeon of St. Luke hospital. The doctor is of the opinion that in our northern climate there is little need for the stimulation of mind and body by tobacco. "Excessive smoking during work," he says, "is not a delusion when men claim that it clears their brains and keeps them active. It is like the Scotchman's snuff. If one analyzes the result, however, one can see that the false energy is as abnormal as the whip lash to a horse, and in the end hurtful. On the other hand, one sees numerous high officials in corporations of national importance, who think their weighty responsibilities are best met by cool, clear brains and natural balance of judgment, unwarped by stimulants, either alcoholic or tobacco. The stand taken by many against tobacco is an unpopular fight.

The frontier man sneers at the tenderfoot who refuses whisky and a chew with the remark: 'Don't drink? Don't chew? What do you do to smell like a man?' The college undergraduate is invited to attend a 'smoker,' and is initiated in a reeking atmosphere of tobacco. Yet at West Point, smoking was prohibited in 1891, and fifteen years later the summary of medical records shows the advantage in work and discipline. In college a group of men subjected to ergograph tests during abstinence and again after four days' smoking is said to have shown loss of 40 per cent. muscle power. In tryouts for football squads it is said half as many smokers as nonsmokers are successful."

The regular monthly meeting of the Christian County Medical Society was held at the Avalon, Hopkinsville, January 19th. There was a large attendance of the physicians of the city and county, and some visitors from adjoining counties. A number of matters of interest to the association were considered, chief among which was the appointment of a committee composed of Dr. S. H. Williams, of Crofton, Dr. J. L. Barker of Pembroke, Dr. Austin Bell, Hopkinsville, and Dr. B. A. Caudle of Newstead, to have charge of arrangements for the meeting here probably next September of the State Medical Association. It is proposed to make this one of the most enjoyable and important meetings of the state body which has yet been held, and the doctors are beginning in time.

Dr. J. W. Crenshaw of Cadiz, read a beautiful paper on "Purity in the Life and Language of a

Physician." Dr. Andrew Sargent also gave an excellent paper on "Typhoid Fever."

The annual election of officers was held at the December meeting when Dr. Paul Keith was elected as president, Dr. W. W. Durham as vice president and Dr. J. W. Harned as secretary and treasurer.

Dr. C. N. Crawford died at his home at Lynn Grove January 5, 1916, of apoplexy.

He had been busy in his practice for a number of days and nights, and came home Saturday evening, retiring early, complaining of not feeling very well. He was usually an early riser, but he seeming to be resting quietly his wife did not awaken him at the usual hour, but going to his bed later found him unconscious. Physicians were called, but he never aroused, and died about 1:30 p. m.

Dr. Crawford was one of the best known physicians on the West side of the county, and had enjoyed a large practice for many years.

He was interested in the Light plant of his city, and had other interests at Lynn Grove and in the county.

He was a good and useful man and will be missed greatly in that community. He is survived by his wife and six children, Wade, Charlie, Bun and Joel, Mrs. Baus Story and a younger daughter, besides several brothers and other relatives.

After funeral services at Goshen, his old home church, by Revs. Hassell and Rudd, the body was laid to rest in the Goshen graveyard.

The hearts of many friends go out in sympathy with the stricken family.

The announcement of the intention of Superintendent Sights not to stand for reappointment as superintendent of the Hopkinsville asylum, which leaves practically an open field for Dr. Fred Larue, of Smithland, who is an applicant for the position, will cause the numerous friends of Dr. Larue both in his home county of Livingston as well as in McCracken where he is well known, to join in a common desire that Dr. Larue may be given the position. In point of ability it would be hard to find a man better qualified for the place than Dr. Larue. He is a physician of long experience and possesses all of the attributes necessary to make him a most desirable man for the place. His personal friendship for Governor Stanley is another sign which points to the conclusion that the popular Smithland physician stands well in line for the important position. His appointment would bring much pleasure to Dr. Larue's many friends throughout West Kentucky.

The appointment bureau of Harvard Medical School has been taking a census of its recent

graduates—a census chiefly of their opinions on the medical profession and upon their success in it. Here are a few characteristic replies.

Nothing doing. Times are harder than ever and collections are rotten. (H. M. S., 1905. Vancouver, B. C., Income, 1913, \$6,000.)

My practice has been unsatisfactory in the ingratitude of patients and other petty annoyances, especially the lying tongues of women. (H. M. S. 1903. Income, 1913, \$4,500.)

There is not enough real honest work for all of us to make a decent living. The dollar bill is still the measure of a man's success. With the majority it seems to be just a game of grab. It is a philanthropy for those who are independent. (H. M. S. 1905. Income, 1913, \$500.)

It is almost necessary to have capital or a wealthy wife to get a start anywhere within twenty-five miles of Boston. (H. M. S. 1906. Income, 1913, \$3,200.)

There are too many doctors. Only a few are respected as the whole medical profession should be. It is an accepted belief that "anybody can be a doctor." (H. M. S. 1903. Income, 1913, \$4,500.)

Chief among the topics discussed at the regular meeting of the McCracken County Medical Society was the attendance at the society meetings, unity, good fellowship and an improvement of ethical conditions existing in the city now. An exhaustive treatise upon medical ethics in general was delivered in an able manner by Dr. J. Q. Taylor, chief surgeon of the Illinois Central Railroad.

Following the paper by Dr. Taylor, a general discussion of conditions was made by all of the doctors present. Dr. O. R. Kidd, in a short speech, made a plea for more interest in the society's meetings and undertakings, and for the social betterment of the profession. Dr. C. E. Purcell gave a short discussion on "Consultation and Examination," in which he pleaded for a better system of examinations, and the keeping of records of all cases handled. He also recommended the holding of clinics at the society's meetings.

Dr. P. H. Stewart will read a paper at the next regular meeting.

Mr. and Mrs. Michael J. Holly, of 408 South Twenty-first street Louisville, are the parents of triplets born at the Norton Memorial Infirmary. Dr. H. L. Read, of 2005 South Twenty-eighth street was the attending physician. Two of the children are girls. The mother and babies are doing well and the nurses and doctors at the institution are taking a great interest in the case. Each of the newcomers has been tied with a different colored ribbon to designate them according to their birth. The father is a machinist employed by the Illinois Central Railway Company. The mother is forty years old and the triplets are her first children. The triplets are said to be the first in five years in Louisville.

Dr. Robert M. Mason and Miss Mary Virginia Conner were married at the home of the bride in this city, last Wednesday morning at 6:30.

Dr. Mason is the junior member of the firm of Drs. Mason & Mason, who conduct the Murray Surgical Hospital, and is one of the finest surgeons of West Kentucky, coming from a family of physicians and surgeons for two or three generations back; and is an accomplished gentleman and a first class citizen.

The bride is the handsome daughter of Mr. and Mrs. Z. T. Conner, of this city, and a granddaughter of the late Senator J. W. Gilbert.

Dr. Harry G. Sanders, an official at the Western Hospital for the Insane at Hopkinsville, and former State Senator from the Marion-Taylor-Washington district, was in Frankfort recently to mingle with his old colleagues in the upper branch, who gave him a warm welcome. Dr. Sanders, who is a Democrat, was succeeded in the Senate by another Sanders, a kinsman and Republican, which prompted the question if they intended to keep the office in the family in political rotation.

The jury in the consolidated damage suits of Dr. John G. South, Lewis Buckner and George Fleming, against the Kentucky Traction and Terminal Company, returned a verdict in favor of the plaintiffs.

Dr. South was awarded \$324 for damages to his automobile which was struck by an interurban car. Lewis Buckner, the colored chauffeur, who was driving the car at the time of the wreck, was awarded \$100, and Georgia Fleming, a colored woman who was riding with Buckner, was awarded \$200.

The trial of the case occupied most of two days.

The Hopkins County Medical Society held its regular monthly meeting here yesterday afternoon, but on account of the bad condition of the roads over the county, quite a number of the members were unable to be here. However, a very interesting meeting was held, which was enjoyed by those in attendance. Dr. J. Y. Welborn, one of the leading surgeons of Evansville and one of the owners of the Walker Sanitarium, was here and addressed the meeting, giving a very instructive illustrated lecture. The meeting was held in the Masonic Temple.

H. T. McKinney, a prominent physician, of this city, and Mrs. Louise Rutherford, formerly of Louisville, were united in marriage at the home of the bride's parents, Mr. and Mrs. T. F. Small, in Allensville, the Rev. J. H. Burnett, of the Baptist church, officiating. Following the ceremony Dr. McKinney and Mrs. McKinney left for a week's bridal trip to New Orleans.

Dr. B. M. Taylor, of Greensburg, found among old family papers a check dated in 1819, drawn on the Burksville, Ky., bank of which Mr. Elisha Taylor was an officer. The printing is a fine piece of engraving and the paper an extra good grade. It looks more like old real money issued by the bank than a check and has withstood the ravages of time wonderfully.

Dr. Joseph C. Browning, of Germantown, sustained a fracture of his right arm at the wrist, when the engine of his automobile back-fired while he was cranking it. The doctor was five miles from his home at the time of the occurrence but drove the entire distance through the darkness, using one arm.

Dr. C. Z. Aud, of Cecilia, has been appointed by Gov. Stanley as a member of the State Board of Health and has received official notice. Dr. Aud has already served one term on the Board of Health and Gov. Stanley recognized his special fitness and ability in the discharge of the duties by reappointing him.

Dr. W. D. Reddish addressed the Premedical Society at State University on January 21. Dr. Reddish is an alumnus of State University and a graduate of the Johns Hopkins Medical School.

His talk was a very helpful one, as he outlined the problems which medical students would encounter during their first two years in a medical school.

Dr. A. R. Setzer, of Nebo, and Mrs. Goochie Gregston, matron of the Kentucky Baptist Children's Home at Glendale, were married in the parlor of the Willard Hotel at noon, January 10, by the Rev. Dr. Theodore N. Compton, of Owensboro, assisted by the Rev. A. B. Gardner, superintendent of the home.

"Economic Waste" was the subject of Dr. J. A. Stucky's address at Curry Hall in the Young Men's Christian Association building. Dr. Stucky did not deal, except in an indirect manner, with the vice evils of the city, but told of the value of the Associated Charities, the baby milk supply station and kindred associations to the city.

Newburg, Ky., a hamlet situated 54 miles above Paducah on the Tennessee river, has been sold back to its former owner, Dr. T. J. Henslee, by C. H. Bradley, of Covington Bros. & Co. Newburg was founded by Dr. Henslee.

Dr. and Mrs. L. L. Robertson are in New York City, where they will be for two weeks. The Doctor while there will take some post-graduate work in his profession.

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SEVENTH DISTRICT

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W. H. LONG Louisville

NEXT MEETING STATE ASSOCIATION.
HOPKINSVILLE, 1916

COUNTY SOCIETY REPORTS

Christian—The Christian County Medical Society met in regular session January 18, 1916. The following physicians were present: Drs. Gaither, Sargent, Sandbach, Rozzell, Barker, Woosley, Keith, Harned, Caudle, Dade, Lacey, Stephens, Lovan, Rice, Bell, Sanders, Sights, Erki-letian, Grave of Tenton, and Dr. Crenshaw of Cadiz.

J. W. Crenshaw, of Cadiz, presented a paper on "Purity in the Life and Language of a Physician."

A. Sargent, read a paper on Typhoid Fever.

These were very interesting papers and enjoyed by all present.

J. M. HARNED, Secretary.

Jefferson—The following report for the year ending December 31st, 1915, is hereby respectfully submitted by your Secretary.

The year has been one of the most auspicious in the history of the society in several ways and in making this report your secretary points with pride to the present condition of the society.

There has been a considerable increase in membership, in attendance, in interest, and last but not least, an increase in funds in the Treasury, with which we have been able to pay some debts which have been hanging over our heads.

There is perfect harmony prevailing, and the prospects are brighter than ever before in the history of the society.

In the passing away of our President, Dr. Ap Morgan Vance, our society has suffered an irreparable loss. His memory will be an inspiration to all of us for time immemorial.

Scientific Work.

The programs as furnished by the Program Committee have been of the highest type, and with few exceptions those upon the programs have responded when their names were called. I desire to thank the Program Committee and the Committee on Clinical Cases and Specimens for their most excellent work. They have always had their work ready, and supplied same when called upon. This as you all know is a very important committee as the attractiveness of the program has a great deal to do with the attendance. In connection with the scientific work, I wish to mention the publication of same, although the Jefferson County Number of the Kentucky State Medical Journal has been discontinued we have been able to have the most of our material published in the State Journal. We are now working on a plan whereby we hope to have a Jefferson County Supplement to the State Journal that will take care of all of our material. I wish to take this opportunity to thank Mr. H. S. Smith, who has so ably reported our meetings.

Financial Business.

The financial affairs of the society have never been in a better condition. They have been well taken care of by our most efficient Treasurer. Although we have not as much money in the treasury as we have had, we have paid the State Association, \$450.00 out of the funds, which we owed on the Journal account. We have also gone to a great expense in fixing up the new quarters.

Library.

During the past year quite a number of books have been bound, and a number of new books have been added to our Library. The entire Library is catalogued so that any book in same can be had at a moment's notice. We desire to thank the Library Board for their great interest in the library and also our librarian, Miss May Coon, for her untiring performance of her duties.

Public Policies.

During the year there has been little action taken by the society in regard to public affairs, a few of which are as follows:

On April 12th, a proposition was presented to the society asking its endorsement of a project to secure a new auditorium for Louisville. It was moved and seconded that the society endorse this movement. The President appointed a committee of two composed of Dr. Harry J. Phillips and Dr. W. E. Gardner, to confer with similar committees from other organizations.

On September 27th, a communication from the City Salesmen's Club asking the co-operation of the Society in connection with the local manufacturers' exhibit, was ordered printed in the program for October.

On October 19th, the President appointed a committee, with Dr. Gaylord C. Hall as chairman, to wait upon the Mayor and ask his co-operation in preparing a place where patients suffering from infectious diseases could be properly cared for.

On November 22nd, Dr. Hall made a preliminary report to the effect that the result of the conference with the Mayor had been unsatisfactory. Dr. Hall also read correspondence between the committee and officials of other cities throughout the country, showing that it was proper and feasible for the City of Louisville to establish and operate a hospital for the care of infectious diseases. It was suggested that the society endeavor to enlist the aid of the Commercial Club, the Board of Trade, and other civic bodies in an effort to bring this about. The report was received and the committee continued with authority to communicate with the various civic bodies in the name of the society and secure their co-operation if possible.

On November 22nd, the society agreed to co-operate with the National Association for the prevention of Tuberculosis, and the members of the society agree to devote their time on Medical Ex-

amination Day, December 8th, 1915, to the examinations of such persons as presented themselves on that day, such examinations to be made for a fee commensurate with the patient's ability to pay.

On November 28, the society held a combined meeting with the Louisville Anti-Tuberculosis Association, for the purpose of discussing the present tuberculosis condition in Kentucky. This meeting, I am sorry to say was very poorly attended by our members.

On September 21, 22, 23, the society entertained the Kentucky State Medical Association, which met in this city, and this meeting proved to be the most successful that the State Association has ever had, so stated by the officers of that body. Due to the hearty co-operation of all of our members and the tireless effort of the members of the Committee on Arrangements we can look back with pride to the entertainment of our guests at this meeting.

At a meeting of the society held October 11th, it was decided that our meeting place be moved from the basement of the City Hospital to its present quarters. Also that we have opera chairs put in to replace the present seats, and that the Library room be shelved to take care of our present library. The work on the shelving has been completed and the chairs will be installed within the next few days, then we will have a meeting place that will lend dignity to our society.

Officers and Committees.

Officers	5
Executive Committees	3
Judicial Council.....	6
Membership Committee	4
Program Committee	3
Clinical Cases and Specimens	2
Library Board	2
Milk Commission	4
Librarian	1

Meetings and Work Done.

Meetings	39
Average Attendance	100
Essays	28
Symposiums	6
Addresses by non-members	8
Call meetings	2
Patients Presented	15
Specimens Exhibited	17
Cases Reported	78
Discussions	463

In looking over the past records, I find that we have had over 100 more discussions this past year than the records of previous years show, which of itself speaks of the interest manifested in the meetings during the year 1915.

Membership.

Close of 1914	235
Number elected in 1915	86
Number by demit in 1915	1
	—
	322
Lost by death in 1915	5
Lost by demit in 1915	0
Lost by delinquency	36
	—
	41
Close of 1915	281.
Close of 1914	235
	—
Net Gain	46

Recommendations.

After studying very carefully the finances of the society, I wish to make the following recommendations:

1st. That the dues be reduced to \$8.00 per year, instead of \$10.00.

2nd. That 10 per cent. of the net income of the society shall be turned over to the Library Board and used for Library purposes.

In retiring your Secretary wishes to sincerely thank the society for the honor bestowed upon him, and trusts that his record has merited your confidence.

I wish to thank the officers and members both collectively and individually for their hearty co-operation and support.

Respectfully submitted,

E. L. HENDERSON, Secretary.

Muhlenberg—At the annual meeting of the Muhlenberg County Medical Society the following officers were elected:

T. J. Staton, President; T. G. Turner, Vice President; Clarence Woodburn, Secretary and Treasurer; John P. Walton, Ross Bennett, and Claud Wilson, Censors; Joe M. Ferguson, Delegate.

Most all the physicians and nurses in the county attended the eye clinic at Greenville, conducted by Dr. John McMullen, Washington, D. C., assisted by Dr. J. N. McCormack, of Bowling Green, and Dr. Bailey of Madisonville.

The subject for discussion at our February meeting will be "Treatment of La Grippe."

CLARENCE WOODBURN, Secretary.

Mercer—The officers of the Mercer County Medical Society for the year 1916 are:

President, T. L. Menaugh, Harrodsburg; Vice President, C. P. Price, Harrodsburg; Secretary and Treasurer, C. B. VanArsdall, Harrodsburg; Censors, W. D. Powell, term expires 1916, A. G. Freeman, term expires 1917, J. B. Robards, term expires 1918; Delegate for two years, C. B. VanArsdall.

C. B. VAN ARSDALL, Secretary.

Muldraugh Hill—The Muldraugh Hill Medical Society was called to order at the City Hall at Elizabethtown, at 10:30 A. M., December 9, 1915, by President Nusz, about twenty-five members being present.

Reading of the minutes was dispensed with.

REPORTS OF OFFICERS.

The Secretary-Treasurer read his annual report showing the financial condition better than ever before with a growing membership and enthusiastic meetings.

ELECTION OF OFFICERS.

Dr. Aud nominated Dr. S. H. Ridgway, of Bullitt county, for president. There being no other nominations the Secretary was instructed to cast one vote for Dr. Ridgway for president. Dr. Ridgway was at once conducted to the chair. Dr. Nusz retiring. The new president thanked the members for the honor conferred on him.

G. C. Hall was continued as Secretary and Treasurer, the Vice Presidents of the Society being the Secretary of the County Medical Society of that county.

A short intermission was declared to allow the members to pay their 1916 dues.

SCIENTIFIC PROGRAM.

A. D. Willmoth reported a case of sarcoma of ovary, in a young girl, filling the entire abdominal cavity where a suspicion of a pregnancy existed. Exploratory operation revealed an inoperable condition. A feature of the growth was its very rapid growth.

C. Z. Aud referred to the work of Dr. Coley in treating these cases with his fluid.

D. W. Gaddie reported briefly a treatment for carbuncles obtained from Drs. Warfield and Ligon, which consisted in covering affected area with cotton saturated in alcohol. Inject into each pustule 90 per cent phenol until white eschar results. In forty-eight hours the process of infection is stayed, the dead tissue is cast off leaving a clean wound. Dilute solutions of phenol are dangerous and ineffective. The treatment can be carried out in the office. He recommended the injection of one pustule daily. The amount of phenol used was not important.

W. L. Mobley commended the treatment using a pine stick with crystals, going slowly down into the infected area. Used 2 per cent cresol compound as after treatment.

A. D. Willmoth recommended citrate of soda, 5 per cent in salt solution as a dressing and ten grains citrate of soda every three hours by mouth. Also autogenous vaccines are a great help in these cases.

C. W. Rogers recommended a similar treatment for sebaceous cysts.

Curran Pope spoke of affecting deep infections by application of x-ray with high tube, using later the high frequency current and Bier's hyperemia.

Where pus has formed get autogenous vaccine or stock vaccine and use x-rays. Has anesthetic and antiseptic effect. Uses same drugs as Dr. Willmoth. Uses static wave current for after-in-duration.

C. B. Spalding thinks we should try to conserve as much tissue as possible not trying to slough out all tissue. Make incision paral-
lel to fibres of underlying muscle, expose parts and apply phenol, later neutralizing with alcohol. Use alcohol over area to prevent reinfection. In felon the simplest treatment is in making an incision through the periosteum which relieves the infection, pain, etc.

C. Z. Aud said he knew a physician who used caustic potash to swab out carbuncle. He uses phenol neutralized later by alcohol. Believes in a wide incision in felon.

D. W. Gaddie thanked the members for their discussion. He further recommended the treatment outlined.

The regular published program was then entered upon.

E. L. Gowdy, of Campbellsville, read a paper on the "Management of the Newly Born." At this point the meeting adjourned for dinner. Called to order at 1:15 P. M.

The discussion of E. L. Gowdy's paper was opened by B. M. Taylor. He congratulated Dr. Gowdy's paper. Advocated personal attention to cord. Should not rock baby or hold it on lap. Should give water frequently and regularly. Should not allow crawling or allow child to put all sorts of things in mouth. Physician should take time to explain all matter in detail.

J. S. Lutz advocated early attention to eyes. Wash as soon as head passes over perineum: use 20 per cent argyrol later. Uses rubber fundis bands. Emphasized the necessity of regular habits.

For temporary constipation pure cream may relieve. Thought condensed milk easily taken and produces fat but children are of low vitality to withstand disease. Get clean milk and don't give boiled milk.

Curran Pope complimented the essayist on his paper and thought such papers of great benefit to men in special fields who gained much information about subjects they would otherwise not be informed upon.

E. L. Gowdy closed the discussion. Defended use of condensed milk as a temporary measure but realized its short comings. Thanked the members for their discussion.

D. W. Gaddie, of Hodgenville, read a paper on use of "Pituitrin in Medical and Surgical Practice."

B. M. Taylor thought its use in obstetrics of considerable value but should be used cautiously and with judgment. Doesn't give full dose but just sufficient to keep up pains.

J. E. Craig thought that the action of the drug was not constant. Thought it good to soften a rigid os. Gave 1-2 c.c. Had never had to catheterize after its use.

R. T. Layman thought action variable. Sometimes gives rise to violent contractions, sometimes is inert.

A. D. Willmoth said from a surgical standpoint the drug was excellent for gas pains. Prevents distention and will relieve after it occurs. Dose from one-half to one ampule. Thought its use of doubtful value in pulmonary hemorrhage.

J. S. Lusz thought pituitrin should never be given until os is completely dilated. Warned that the drug loses strength in time and should be replaced. Has had happy results in post partum hemorrhage. Thought secretion of milk was hastened thereby.

B. J. O'Connor asked why drug should not be used until cervix is dilated.

J. S. Lusz answered by saying that it stimulated the muscle fibre directly, causing hour glass contraction in some cases.

D. W. Gaddie thanked the members for not jumping on him. Did not give pituitrin in placenta centralis, but practiced manual dilatation, version and later gave the drug. Thought pituitrin a preventive of post partum hemorrhage. Stuck to his statement of value in pulmonary hemorrhage because it contracts unstripped muscle in vessels very quickly and decidedly which effect more than counterbalances the stimulation of the heart. Was convinced that it prevented after pains, especially in multipara. Knew of no evil results from its use.

R. C. McChord's paper on "Some Aphorisms in the Practice of Surgery," was passed owing to his unavoidable absence.

C. B. Spalding, of Louisville, read a paper on "Prostatectomy."

B. M. Taylor thought the lesson to be derived from the paper was the necessity of early operation, before the entire urinary tract became infected.

Guy Aud congratulated the doctor on his paper. Thought one should do a cystoscopic examination. Thought the specific gravity of the urine should be 1014-18 before operating. Cystoscope would show stone or median bar. Gave kidney functioning test.

A. D. Willmoth called attention to the tube of Hunter Meguire, and later adopted by Dr. Rodman, like a tracheotomy tube with trocar inside. Would thrust tube into bladder with trocar inside after opening skin and superficial fascia. Does not put patients to bed, which is important. It is easy to handle and efficient and keeps patient dry.

Curran Pope thought it an injustice to turn over patients to the surgeon in as bad a condition as had been stated. Thought operation could be deferred with safety at times. The di-

viding line is this. As long as patient is able to empty bladder it is not a surgical case. After residual urine appears it is surgical. Can develop musculature of bladder by sinusoidal current and will reduce size of gland. After operation patient should have modified rest treatment. Build up nutrition in every possible way.

The hard problem in medicine is to get results without the use of drugs. Medicine is not all chemistry. It takes more time and trouble but you get results.

C. B. Spalding in closing the discussion wanted to emphasize the better results obtained in early operation. Agreed with Dr. Aud's tests but some cases would admit of no delay. In operating work quickly, don't meddle; avoid shock.

Guy Aud, of Louisville, read a paper on "Local Anesthesia."

G. C. Hall opening the discussion complimented the essayist on his excellent paper. He was glad the general surgeons were devoting attention to a successful method of anesthesia that had been used by eye, ear, nose and throat men for many years. Regarding technique he thought that solutions for injection were used too strong. A 1-10 per cent. solution of cocaine would produce a satisfactory anesthesia and furthermore it needed but one drop of adrenalin, 1-1000, to about twenty drops of cocaine to produce a satisfactory ischemia. Thought that post operative bleeding and disturbances in healing due to too strong solutions.

A. O. Pfingst thought weak solutions were preferable for injection while very strong solutions were preferable for local use. Didn't use adrenalin in nose except in submucous resection work. Had seen some cases where no anesthesia was produced.

C. B. Spalding thought local anesthesia a great advance in surgical technique. Had never seen infection follow its use. Thought its use required considerable skill. Spoke highly of Crile's anoci-association anesthesia. Thought the personality of the doctor had a great deal to do with the complete anesthesia.

A. D. Willmoth complimented the paper very highly and praised the method of handling the subject. Thought the local anesthesia a great boon for the surgical relief of minor conditions. Eliminated the danger of general anesthesia. Should remember that anesthesia will be poor in acutely inflamed areas. Thinks after effects of adrenalin are bad due to late bleeding. Clot infection prevents healing by first intention. Warned against one per cent solution of quinine and urea as it delayed healing. In nervous people give preliminary dose of morphine or scopolamine. Thought Crile's anoci-association greatly overestimated. Personally thought it of little value. Regretted that the method required so much time.

C. B. Spalding explained that in anoci-association

you had complete relaxation; also with quinine-urea anesthesia—persists sometimes for two or three weeks. Don't inject quinine-urea along line of incision. Thought infection was due to faulty technique.

C. C. Carroll thought the paper was of great importance. Warned against the use of strong solutions of cocaine for injection.

W. F. Alvey noticed that the anesthetic power of novocaine is much less than that of cocaine in equal strengths as used in trachoma operations.

C. Z. Aud wished to emphasize the psychologic effect in these cases in relieving fear.

Guy Aud, in closing, called attention to the fact that cocaine being so diffusible was hard to handle in general surgical work therefore novocaine was used. Thought anoci-association of considerable value and thought failures due to faulty technique and not knowing what to expect. Expects temporary induration of tissue following quinine and urea.

The hour being late and having listened to a full discussion on all the papers, Dr. C. Z. Aud moved that the session be brought to an end and that the remaining paper be held over until the April meeting. Seconded. Carried.

Society adjourned to meet again in April.

GAYLORD C. HALL, Secretary.

Washington—The Washington County Medical Society met in the offices of Dr. J. C. Mudd, Springfield, on December 22, 1915, for the purpose of electing officers for the year 1916.

W. E. Crume was elected President; J. C. Mudd, Vice President; J. H. Hopper, re-elected Secretary and Treasurer; W. E. Crume, Delegate; W. S. Gabhart, Alternate; W. T. Barnette, Censor.

R. H. Hamilton was elected to membership.

J. H. HOPPER, Secretary.

Selective Sensory Regeneration—I. H. Coriat, Boston (Journal A. M. A., Feb. 5, 1916), gives a careful report of a case of ulnar nerve lesion in which the sensory symptoms were modified in a way which showed the independence of these nerve endings in the skin after complete severance and regeneration of the ulnar nerve. During the process of regeneration isolated pain points could be demonstrated in an otherwise completely anesthetic area, while inside this area they were so closely crowded together that they formed a zone of extreme hyperalgesia. Deep sensibility was intact. The condition proved that the specific receptors for pain were not only independent but were also more capable of rapid regeneration than the specific receptors for touch, thus making the case of special interest. The conclusion is drawn of the independence of the nerve supply of the skin from specific afferent receptors. The specific nerve endings for touch entirely disappear. The condition, as he says, is best termed a selective sensory regeneration.

BOOK REVIEWS

Anoci-Association.—By George W. Crile, M. D., Professor of Surgery, School of Medicine, Western Reserve University, Cleveland; and William E. Lower, M. D., Associate Professor of Genito-Urinary Surgery, School of Medicine, Western Reserve University, Cleveland. Octavo of 259 pages, with original illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth \$3.00 net.

Dr. Crile and Dr. Lower's reputation as successful surgeons and recognized scientists needs no reviewer's help to become world-wide. The shockless operation and technique elaborated and perfected by these surgeons with a record of 30,000 cases is within the scope of every surgeon without the necessity of extensive study abroad.

Every detail, of the necessary steps of the technique even to nursing is complete. The surgeon to-day who refuses to follow such anoci-association technique says in other words to his patient: "I can guarantee you a minimum of danger a maximum of comfort, comparative freedom from post-operative pain and complications by following the methods and principles laid down by Dr. Crile's experience, of 30,000 cases, but I am too busy to waste an hour or more on you for that purpose. You must take your chance and run through all these dangers."

Every surgeon should read this monograph, we read with ease in two evenings. The technic is not too difficult and one can carry it out with his own modifications.

The results of years of work and experience backed by an experience of 30,000 cases are the data on which the work is based. It contains a monograph on shock, with above all a successful treatment. The succeeding chapters give the details of every operation in clear style and splendid type.

Dr. Crile's work has been well called the most important contribution to surgery since Lord Lister's time.

The Practice of Pediatrics.—By Charles Gilmore Kerley, M. D., Professor of Diseases of Children in the New York Polyclinic Medical School and Hospital; Attending Physician to the New York Nursery and Child's Hospital; Assistant Attending Physician to the Babies Hospital; Consulting Physician to the Servilla Home for Girls and to the New York Home for Destitute and Crippled Children; Consulting Pediatricist to the Greenwich (Conn.) Hospital to the Tarrytown (N. Y.) Hospital to the Englewood (N. J.) Hospital and to the Lawrence (Bronxville) Hospital; Ex-President American Pediatric Society; Ex-President New York County Medical Society. Illustrated. 1914. Philadelphia and London: W. B. Saunders Company. Cloth \$6.00 net.

This book, including index of some eight hun-

dred pages, is about the most comprehensive single volume textbook on children which it has been our pleasure to see. No aspect of pediatrics seems to be so important as to be slurred. Starting with the nutrition and growth of the newly born, the author successively enters into a thorough withal concrete exposition of examination and diagnosis, diseases of the new born, diseases of the mouth, and esophagus, of the stomach, intestines and peritoneum, the rectum and anus, the spleen and liver, diseases of the respiratory tract, of the heart, the blood, and blood diseases, the glandular system, the urogenital system, nervous disorders, diseases of the skin, of the ear, the transmissible diseases, unclassified diseases, miscellaneous subjects, suggestions in management, therapeutic measures, gymnastic therapeutics, drugs and drug dosage. The book is simply but well written, practical and abounding with helpful suggestions. We are particularly pleased with the therapeutic advice. It is this feature which should make the book very acceptable to the profession. Certainly taken all in all, it is well balanced most practical and well illustrated. It should receive a most cordial reception from the medical profession, as it is along the lines which tend to popularity, viz. practical.

A Text-Book of Military Hygiene and Sanitation.—By Frank R. Keefer, M. D., Lieutenant-Colonel, Medical Corps, United States Academy, West Point. 12mo. of 305 pages, illustrated. Philadelphia and London: W. B. Saunders Company 1914. Cloth \$1.50 net.

The subject of military hygiene is to-day a science in itself and it behooves every physician who wishes to do his share in these war times to equip himself with the necessary knowledge. Colonel Keefer's book is small and easily read, the language is not technical and the book can be mastered by any one with average knowledge. We can highly recommend it to all those more or less interested in our different militia and boy scout organizations.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago.—June, 1914. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Company. Bi-monthly. Paper \$8.00 per year. Volume III. Number 3.

Still they come and just as interesting as when they first made their appearance. It is inconceivable how any up-to-the-minute, active, wide-awake surgeon can do without them. This number is just as full of interesting material as any of its predecessors, giving a complete and accurate resume of the recent work done at the clinic of that renowned surgeon, John B. Murphy. In this number one is regaled with the reciting of the histories, course, outcome and operations on such varied conditions as ruptured tendons, sev-

ered nerves, bony ankyloses, fractures, ulcers of the stomach, sarcoma of the ovary and ankylosis of the jaw. As in other numbers, so here one will find about 200 pages full of practical suggestions, hints that can be put to every day use.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago.—Volume III, Number 5. Octavo of 190 pages; 61 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Published bi-monthly. Price per year; Paper \$8.00; Cloth \$12.00.

A very interesting number of Murphy's Clinics. A considerable portion of the volume is given over to clinical diagnosis—given in Dr. Murphy's own way. Other clinical cases demonstrated and operated on are: Traumatic Epilepsy; Epithelioma of glans penis; Carcinoma of corona penis; Fecal fistula; Several ankle operations; Removal of nail from right tibia and os calcis; Arthroplasty of the knee; Arthroplasty of the elbow; Hypertrophy of middle lobe of prostate; Imperforate anus; Carcinoma of breast and a discussion of the use of radium and x-ray.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago.—December, 1914. Published by W. B. Saunders Company, Philadelphia and London.

This volume of Murphy's Clinics concludes Volume III, and is of equal interest as the preceding numbers. He gives the usual space to clinical diagnosis and discusses the following cases.

Appendicitis in pregnancy; Auto-sensitized autogenous vaccines; Impacted fracture of external tuberosity of tibia; Sarcoma of the right tibia; Exostosis of the interarticular surface of upper end of left tibia; Multiple metastatic arthritides; Cartilaginous exostosis of left humerus; Bilateral tuberclelosis epididymitis; Gummatous tumor of testicle; Perforating duodenal ulcer fixed to the anterior abdominal wall; Retroperitoneal sarcoma of the upper abdomen.

The Clinics of John B. Murphy.—Vol. III, No. 4, August, 1914. 617-869 pp. W. B. Saunders Company, Philadelphia.

This volume of Murphy's Clinics is undoubtedly the best and most interesting that has yet been issued. Replete with well-executed photographs showing practically every step of the operation of arthroplasty of the hip and for luxation of the patella the reader is getting a better substitute for a personal visit to Mercy Hospital than has been afforded in the past. The text, too, is lucid and not quite so "spread out" as we have had the occasion to criticize in previous volumes, but is pointed and crisp. The very first chapter on surgical diagnosis is highly instructive though reminiscent.

Practical Cystoscopy and the Diagnosis of Surgical Diseases of the Kidneys and Urinary Bladder—By Dr. Paul M. Pilcher. Second Edition thoroughly revised and enlarged. Contains 504 pages with 299 illustrations, 29 in colors. Published by W. B. Saunders Company, Philadelphia. Price; cloth, \$6.00; half morocco, \$7.50. The last part of the book deals with the therapeutic uses of the cystoscope and has been rewritten and very greatly extended. Section I takes up the general therapeutic uses of the cystoscope. Section II deals with the special therapeutic uses of the cystoscope.

Your Baby—By Dr. E. B. Lowry. Published by Forbes & Company, Chicago. Price \$1.00. Any book which helps to give a human life a fair start in health should be welcomed and widely circulated. Such a book is this splendid volume by Dr. Lowry. It contains the latest and best approved methods for the care of the baby—its feeding, clothing, exercise, sleep and training. It is full of common sense help and facts that many mothers might overlook.

Painless Childbirth—By Dr. Carl Henry Davis. Published by Forbes & Company, Chicago. Price \$1.00. The first part of the book traces the development of the attempts to relieve the suffering of labor. The chemistry, pharmacology and toxicology of the various analgesics are compared and their advantages and disadvantages considered with unbiased fairness. In the second part of this volume eutocia is given as the goal for which the physician is striving.

Surgical Operations With Local Anesthesia—Second Edition by Dr. A. E. Hertzler. Published by the Surgery Publishing Company, New York. Price \$3.00. This second volume covers, completely, minor and major work under local anesthesia. It has 327 pages and 173 illustrations. Both the general practitioner and the surgeon will appreciate this work as a reliable guide in their operation work under local anesthesia.

Nitro by Hypo—By Edwin P. Haworth. Published by the Willows Magazine Company, Kansas City, Missouri. Price \$1.00. This book is issued for the inspiration and encouragement of the physician as a class. The delightful work of printer and binder is made to harmonize with the optimistic thought and cheerful sentiment of the text itself. It is a 12mo book of 128 pages.

Ophthalmoscopic Diagnosis—By George W. Jean, A. B., M. D. Published by E. B. Meyrowitz, New York. This book is written for the general practitioner and student. It is both concise and practical and up to the usual high standard.

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No. 4

EDITORIAL.

THE VITAL STATISTICS FOR 1915.

In this issue of the JOURNAL Dr. W. L. Heizer, the State Registrar of Vital Statistics makes his preliminary report for 1915. This will be found in detail under the head of Official Announcements. There were registered during 1915, 63,478 births and 28,913 deaths, giving a birth rate for each hundred thousand of our people of 26.6 and a death rate of 12.1. In 1914 the birth rate was 25.2 and the death rate was 12.7. This shows a gratifying decrease in the death rate and an equally gratifying increase in the birth rate. Of the deaths for 1915, 4,730 were of infants under one year of age; 2,142 were aged one to five years; and 7,454 were sixty-five years of age or over. The deaths from the preventable diseases were 40 per cent of the total deaths as compared with 42 per cent. for 1914, and 47 per cent. for 1911. This indicates that the increased education in sanitation of our people which has been brought about by the medical profession of the State has saved 2,023 lives which would have been lost had the same conditions of public sentiment as to health matters obtained as in 1911. THE JOURNAL, as the representative of the medical profession of Kentucky, takes a great deal of pride in this state of affairs. We ask the further continued co-operation of the profession with our health officials in such an enforcement of not only statutory laws but the laws of right living that the sick and death rate from preventable disease may be further decreased from month to month and year to year.

Consumption in all its forms caused 4,692 deaths; typhoid fever, 904; diphtheria and croup, 540; scarlet fever, 46; measles, 77; whooping cough, 187; the pneumonias, 2,385; summer complaint in children, 842; dysentery in persons over two years of age, 369; meningitis, 379; la grippe, 501; puerperal septicemia, 130; cancer was responsible for 1,090; and violence, 1,683. As compared with 1914, there was an increase of 441 deaths

from tuberculosis, 42 from diphtheria, and 125 from the grip. There was a decrease of 290 from typhoid, 92 from scarlet fever, 189 from measles, 175 from whooping cough, 203 from the pneumonia, 500 from the summer complaint of children, 117 from meningitis, 78 from infection at childbirth, and 371 from the diarrhoeal diseases of people over two years of age. It is gratifying to note a decrease in the deaths from cancer of 38 and from violence of 323 from the previous year.

Of special importance is the increase in the death rate from tuberculosis, and it is essential that the profession and people be made to understand that this rate cannot be decreased until every individual who has, or is suspected of having this disease, is taught that each time he coughs or expectorates he must do it in such a manner as to prevent the scattering of the seed of the disease. This can be done by using spit cups which can be purchased from any of the instrument houses, or home made spit cups from butter paper. It is better to even use spit cups made of newspaper than to use nothing, but of course these must be destroyed after being used each time.

The increase in the death rate from diphtheria is particularly to be noted. There was a state-wide epidemic of diphtheria this year, but 540 deaths from this disease indicate that in this many cases enough antitoxin was not used or it was not used early enough. There should be no deaths from diphtheria if enough antitoxin is administered in the first twelve to twenty-four hours of the disease. It is inexcusable at this time ever to administer less than 5,000 units in the initial dose and if the case is a severe one 10,000 or 20,000 units should be administered at this time. It is up to the medical profession to stop this disease. In order to accomplish this, it is essential that our people be taught that whenever there are white patches in the throat they should send for a doctor at once.

The increased death rate from the grip would have been avoided largely had our people been taught to stay at home and especially not to go to church or picture shows and other crowded places when they had mild

cases of the disease. Grip is very contagious and the patient should be isolated as strictly as in any other disease and instructed to cough and sneeze into the spit cups just as consumption.

The statement of the facts in this report will be read with considerable gratification by everyone interested in the future of the Commonwealth. We are certainly fortunate in having in Dr. Heizer a devoted, energetic, conscientious registrar of vital statistics, whose whole-hearted devotion to his duty has met with the enthusiastic support of almost every physician and a large part of the people of the State. If we will but take the lessons these figures show, to heart and get to work, we can save the health and lives of thousands of our fellow citizens each year.

YOUR DUES.

Unless you have paid your state and county dues to your County Secretary, this will be the last issue of the JOURNAL you will receive and your name will be dropped from the active list of membership in the State and County Associations. The benefits of membership are too great to be held lightly. Many more than half of our members had paid their dues this year by the first of March, and we trust there will be few delinquents on April first. It is well to recall that those who lose their standing cannot be defended in case they are sued for malpractice for any case they have treated heretofore and that they will only be protected from the date of their reinstatement in their county society. No member can afford to take this risk.

Neither can any member afford to do without the JOURNAL. Dr. Morgan of Logan County wrote us the other day: "After looking over the March issue of the JOURNAL, I honestly believe it is the best and most helpful number to the doctors of Kentucky you have ever gotten out. It shows what splendid work the Association is doing throughout the State, and also the interest that is being taken in preventive medicine. Our JOURNAL is certainly up to the standard and we should all appreciate it."

Dr. Morgan could hardly know the pleasure it gave the whole JOURNAL staff to get his letter, and while we know that our JOURNAL is but the product of the great organization which has biltled itself so well, it is a pleasure sometimes to be patted on the back, and it will be a matter of great pride if we can announce in the May issue that every member has so appreciated the work of the organization that no one of them has become a delinquent. Will you not do your part by sending your dues to your county secretary to-day?

DEXTRI-MALTOSE,

Everybody in this section of the country will be glad to note the removal of the manufacturing plant of the Mead-Johnson & Co., the manufacturers of Dextri-Maltose, from Jersey City to Evansville, Indiana. It is not only satisfactory to have this great plant moved into our own neighborhood, and in many ways Evansville is practically a Kentucky town, but it is equally gratifying to know that it is vacating an old factory with 18,000 square feet of floor space and is moving to a new plant with 300,000 square feet, sixteen times larger than the old one.

The Dextri-Maltose people are one of the few food manufacturers who did not offer to both physicians and public, by advertising or otherwise, anything which requires medical skill to properly use. Particularly many of the manufacturers of infant foods have persistently advised to the public to use their wares, regardless of their contents or of the conditions of the child. However, the day of mystery and traditions in infant feeding is rapidly passing. The reform in manufacturing and selling infant food was inevitable. While no child should ever be fed artificially if it is at all possible for the mother to feed it, the recent simplification of bottle food, rendering it possible for the family physician to successfully adapt the diet to the individual baby, has brought about a strong conviction that the direction and supervision of infant feeding is distinctly the proper work of the thoughtful, practical physician. This in turn has created a demand for carbohydrate food which can be kept fresh prepared in exact proportion to meet clinical indications; and for their sale without directions for use, so that the physician can personally control the infant patient's food supply. The manufacturers of Dextri-Maltose were among the first to recognize their duty to physicians and through them to the public. It is a pleasure to know in this instance, as in all others, that honesty has paid.

DR. TANEYHILL.

THE JOURNAL desires to express to the Medico-Chirurgical faculty of Maryland the feeling of sincere regret with which the medical profession of Kentucky noted the death on March 2nd of Dr. George Lane Taneyhill. For many years, Dr. Taneyhill has been one of the most effective delegates to the American Medical Association. He joined a remarkable beauty of personal character to an unusual clear mind. The profession can ill afford to lose such leaders.

DR. W. L. RODMAN.

It was only the other day that Dr. Rodman was before the Council on Medical Education and its affiliated bodies in Chicago, sweeping everything before him in his eagerness to give to the medical profession of the whole United States that homogeneity which he always believes could only be brought about by a National examining board which would in a degree equalize, while raising, the standards of all the states. Back as far as 1893, Dr. Rodman had begun the campaign for this great result. His tenacity and persistency had all but won the fight, and the memory of his quarter of a century's campaign will win it yet. Dr. Rodman's gratitude at his elevation to the presidency of the American Medical Association was far more for the opportunity it offered for doing good than because of the gratification of his personal ambition.

He was only sick forty-eight hours. A couple of days before, he had written the editor of the JOURNAL asking him to appeal to the profession of Kentucky to help him to persuade Congress to adequately equip the medical corps of the army so that in case of the mobilization of the state militia at some future time, the war-camp-shambles of the Spanish-American War might be avoided. Every doctor recalls the shame we all felt when typhoid fever decimated the ranks of our soldier boys encamped at Chickamanga and elsewhere. Just at present the medical corps of the United States army is under the command of probably the greatest practical sanitarian the world has yet developed, General W. C. Gorgas. It would be a burning shame if the military forces of the country should be increased so as to make it impossible for the medical corps to be so reorganized as not to be able to care for the health and efficiency of the forces. Our congressmen can't know these things unless we tell them, and if at some future time the boys of our neighborhood enlist in their country's defense and are laid low, not by the enemy, but by disease, let us at least be sure that it is not because of neglect on our part. Let each of us do as Dr. Rodman would have had us do, write and tell those of our senators and congressmen whom we know and who have confidence in us, to properly protect the health of the army. Dr. Rodman would not have his friends in his profession falter in their duty because their leader has fallen, and those of us who are left must press on with the victory he would have graced and won had he been spared us.

Dr. Rodman was a great teacher, a great leader, a great statesman, and he was above all things a surgeon. He loved surgery for the good it did, and he devoted himself to his

profession with a driving force that was bound to win. His method of amputation of cancer of the breast is beyond question the ideal method. He always had the courage of his convictions and he won his way in all his varied activities because he was usually right and always fearless.

To his devoted wife and gifted son, the JOURNAL extends the sympathy and love of the medical profession of Kentucky. We loved him and were proud of him and followed him and we sorrow for him but will always follow the ideals he held so high and hope to be worthy of the friendship of one who so loved his friends.

DR. VANCE.

Dr. Ap Morgan Vance is dead. As simple as a child, as pure and sympathetic as a woman, as manly as the very best, Dr. Vance was one of the very best of the technicians among all the surgeons we have known. He was one of that splendid class which not only knows when and how to operate but that also knows when an operation should not be done and had the courage not to do it. As affecting his own work Dr. Vance was a most successful surgeon.

In a much broader sense Dr. Vance was a medical statesman. He always took an active part in everything that pertained to the profession as distinguished from his own individual life and interests. We do not recall a meeting of the State Medical Association when he was not present. It was rare indeed that he was not in his seat at the Jefferson County Medical Society. Coming from a home life that was ideal and leaving friends at his clubs and in their homes who idolized him, he always said that he could not afford to be away from the gatherings of his professional brethren, as in them were being built the plans that meant its future success or failure. He had been a member of the House of Delegates of the State Association for fifteen years until last September, when he was elected president. He had not been installed in office but was taking an active interest in preparing the scientific work for the next session at the time he was stricken.

The most enduring monument to his love for his city and profession is to be found in the splendid Louisville City Hospital. There are more expensive institutions, but there is not another in the whole land, or in the world, which better combines that paternal care which every city should extend to its sick and poor, and at the same time offers to its teaching university every facility for the kind of clinical and research work which makes it possible to produce good doctors. Most of

what is best in the great hospital was the work of Dr. Vance. He was never connected with medical education. During much of his busy life medical colleges were not the high-grade institutions with which he would have connected himself, but toward the close of his lifetime he probably did more for medical education in Kentucky than any dozen of its teachers ever had the opportunity of doing. The profession of Kentucky can ill afford to lose such a man and leader as Dr. Vance, but his memory will be an inspiration to everyone of us that was in any degree worthy of his association and his friendship.

DOPE DISPENSING.

The State Board of Health held a very important meeting in Louisville on March 8. Three physicians were cited to appear to show cause why their licenses should not be revoked for grossly unprofessional and dishonorable conduct of a character likely to deceive and defraud the public. After hearing the evidence in these cases, the certificates of two of the physicians were revoked. The evidence brought out at the trial is of importance to every practicing physician in Kentucky. It was a revelation to the members of the State Board to find that there are physicians who claim to be able to treat drug habitues at home by the so-called gradual reduction method. The Board holds that such a method is a fraud and a farce. To give a patient a prescription for a drachm or an ounce of opium or morphine or cocaine, accompanied or not by some simple tonic, and tell them to take the stuff at certain intervals with the purpose of curing them, is deception and fraud under the statute. Under the combined Federal and State laws, the only way a physician can keep his skirts clear in the matter is not to prescribe or furnish morphine to habitues. If he does so, he imperils not only his liberty but his right to practice medicine. It was shown in the evidence that one of these dope dispensers had purchased the equivalent of 29,600 quarter-grain hypodermic tablets of morphine in sixty days and that he administered them by hypodermic to all applicants who paid him twenty-five cents or more "a shot." A certificate from the State Board of Health of Kentucky is not a cloak for dishonor and does not provide license for the commission of malpractice or fraud. The profession and the people of the State will heartily approve this action of the Board and we trust that every doctor who is assisting in dispensing dope to these poor unfortunates will be brought to the bar of justice.

The editor of THE JOURNAL, at a recent meeting of the Southwestern Kentucky Medical Society, was delighted to hear a large

number of physicians from the smaller towns of Western Kentucky say that there was no difficulty in treating morphine habitues if you simply stop giving them the drug. They reported a large number of cases successfully treated by simply withdrawing the drug. In these towns, all of the physicians agreed that they would furnish it no more. Of course a patient with inoperable cancer or other similar hopeless, painful conditions can be provided with morphine. There is no excuse, however, for prescribing large quantities of cocaine in any case. We doubt if there is a throat specialist in the State who uses half an ounce of this drug in a year and a prescription calling for a quantity of this very dangerous drug would be considered, *per se*, fraudulent.

Up to the present time the State Board has waited for the courts to take action in these dope dispensing cases before it has started, but hereafter it desires to serve notice on the profession and the public that it holds the dispensing of opium or cocaine or the derivatives of either to habitues, as grossly unprofessional conduct of a character likely to deceive and defraud the public; and in case evidence is submitted to it warranting such procedure it will cite any physician in the State who is dispensing or prescribing dope to habitues before it to show cause why his certificate should not be revoked.

PROPRIETARY MEDICINES.

We had the misfortune the other day of being present at a trial where a lot of physicians with great reputations were called as expert witnesses. You will note that we make a very careful distinction between great physicians and physicians with great reputations. The JOURNAL believes that the greatest physicians are those on the firing line, the men who are practicing medicine in the homes and carrying with them the great lessons of preventive medicine and doing the actual work of the physician. But the men with great reputations are more frequently the medical witnesses and it is of these that we are thinking just now. They were testifying that a patent medicine containing 16 per cent. of alcohol should not be given, and on cross examination when they were asked what they used for conditions for which this patent medicine had been advertised, it made one who knows feel ashamed to hear them say they had used Aletis Cordial and Gadine Cordial and Genitone and gin and whisky and Hayden's Viburnum Compound—not one single one of which has the slightest medicinal or therapeutic value except for the very much larger per centage of alcohol that it contains. It is

very, very rare that alcohol should be prescribed. It should almost never be prescribed for those painful conditions that are bound to recur in women; but if it is to be prescribed, have the courage to tell your patient to drink whisky and do not hide yourself behind some name which simply disguises a cocktail. There was not a doctor present that could have told the contents of any of these proprietary concoctions which he had prescribed, and we desire to go on record as believing that the patent medicine man is just as honest and just as honorable if not more so, than a doctor who will give to a patient who confides in him a preparation of the contents of which he is ignorant. If you do not know the ingredients and the effects of the ingredients when administering singly or in the patent combinations, of any preparation that you are using, throw it into the swill pail and take a fresh start. We believe in drugs. We believe they are frequently effective in a way that nothing else can be, but as far as we ourselves are concerned, we should as soon take a draught of patent medicine from the shelves of a druggist as a draught of the same sort of thing from the prescription of a doctor who knows no more about the preparation or the diagnosis than the druggist did. Let us examine our patients thoroughly. Most of our doctors are doing this. When we have established a diagnosis, if we do not know how to treat them, let us send them to somebody who does until we have studied therapeutics and materia medica and pharmacology, and let us once for all make up our minds that we are not going to take the word of the manufacturers of the various secret proprietary cocktails for their therapeutic efficiencies.

SEND FOR CONTAINERS.

The State Bacteriological Laboratory has a depot for mailing cases in every county in the State and these containers will be sent to any doctor upon request. This announcement has been published in the Bulletins sent out by the State Board of Health each month, in repeated editorials in the JOURNAL, and by circular letters to every physician. Yet the Laboratory continues to receive sputum from suspected cases of tuberculosis in vaseline cans, hookworm containers, rags and cotton mailed in an ordinary envelope, malted milk jars and on pieces of window pane, diphtheria containers often only cotton plug used as a stopper. This not only necessitates rehandling of this most dangerous material by the laboratory workers, but is in direct violation of the United States Postal Statutes.

BIRTH REGISTRATION.

At the same meeting of the State Board of Health at which the dope dispensers were heard, a Wayne County physician was cited to appear for having failed to register his birth certificates with the local registrar within ten days after the birth, as required by law. The Board holds that failure to register birth certificates is grossly unprofessional and dishonorable conduct of a character likely to deceive and defraud the public in that it deprives and tends to deprive citizens of important right and the State of essential records required by law.

Last year 63,478 birth certificates were registered in Kentucky, as required by law. Practically every physician and even every midwife in the State is complying with the law. The State Board of Health proposes to see that those who are not now complying with it be made to do so. It is not fair to the great bulk of our profession who are taking the pains and trouble to make the vital statistics law a success to let it be hurt by the few careless or negligent men or women who are not making reports. We are led to believe that Kentucky is getting the best birth returns of any state in the Union, and if we can have the help of the reputable doctors in prosecuting those who are not making reports, we will get the few remaining certificates that are out. On this subject, in an editorial in *The Texas State Journal of Medicine*, which, by the way, is about the best State journal published, Dr. Taylor has the following to say on the subject:

"Considering the fundamental importance of the subject, it is passing strange not only that physicians who are morally and actually bound, and according to the implied if not the actual terms of their contract with the family but the public as well, should tolerate such a situation. It seems to be wholly a matter of failure to appreciate the importance of birth registration, both on the part of the medical profession and the laity. In line with the recent agitation of the question in the public press we are presuming to add our voice.

"As to the importance of birth registration, we may urge that:

"Questions of legitimacy or illegitimacy, which may arise in the best regulated families, may often be settled only by reference to the fact of proper birth registration.

"The matter of inheritance, and other property rights as well, may often depend on ability to prove direct descent, and this is often impossible except by reference to proper birth registration.

"Nice legal points pertaining to the so-called

ed 'age of consent' in the girl, and eligibility to reformatory or penitentiary incarceration, and even capital punishment, may often be properly and justly solved only through the agency of a properly recorded birth certificate. Too frequently these important issues are to be decided only by reference to an old family bible, perhaps prepared for the purpose, and in order to frustrate the ends of justice.

"Eligibility to enter our public schools, or the State University, either in its main department or its professional schools; eligibility to office; eligibility to service in the army or navy, or opportunities in a business way, may depend absolutely on the recorded birth certificate.

"The proper administration of child labor laws, and the recently enacted compulsory education law, is impossible without proper birth registration.

"Dependable statistics relating to infant mortality and morbidity, particularly as to the existence of blindness, may not be gathered, except through the agency of birth registration.

"The commercial value of vital statistics has long since been thoroughly established. Incomplete birth registration and complete death registration, gives the appearance of extremely unhealthful conditions. In Texas, (as in Kentucky), the deaths are generally reported because of the requirement that no one may be buried without a permit, which requirement directly pertains to an important business enterprise. In comparison, the death rate and birth rate appear entirely disproportionate, reflecting unfairly on the healthfulness of our State and the several communities involved.

"In this country there are many people of foreign birth, and it is very important that the citizenship of their offspring be established by law, in the instance any of these children should desire to return for a visit to their fatherland, and should happen to be needed for military or other purposes.

"Much attention is now being paid to the care of babies, and to the instruction of mothers as to their care, particularly by the Children's Bureau of the U. S. Department of Labor, and it is important that these helpful agencies may know where to deliver the useful information and helpful instructions they are gathering and distributing daily.

"It is said that one-third of the blindness in the United States is due to lack of care of infants at the time of birth. If births are not properly recorded, health officers and other agencies can do little to save the sight of these unfortunates. There are many other pre-

ventable diseases and ailments to be considered in the same light.

"It is said the birth record is perhaps the starting point of about 75 per cent. of our effective baby saving work.

"Dr. William R. Bach, Chairman of the Committee on Birth Registration of the American Association for the Study and Prevention of Infant Mortality, in his report, 1911, said:

"Why should the visiting nurse or the medical inspector go groping blindly around the courts and tenements for babies, when a properly conducted birth registration bureau would send them on their journey with absolute directness? There is ample ammunition upon every standard birth certificate to equip every inspector in advance of house visitation with knowledge of the most vital character. The visiting nurse knows the plague spots of her particular district; she knows where poverty and overcrowding exists; where contagious diseases thrive, where dirt abounds and where sunshine never penetrates. The mere statement of locality upon the birth certificate should bring the individual picture before her."

"In New Zealand, where birth registration has existed for many years, statistics show a steady and stable decline in the infant death rate, until in 1912 it was only 3.8 for every 100 births, probably the lowest in the world.

"Something of the importance of proper birth registration may be judged from the fact that in 1913 there were 15,496 certified copies of the birth records made in New York, and 123,347 free statements issued for school and employment purposes. That is to say, the birth records on file in New York City helped to enforce the personal or property rights of 138,842 persons during that one year alone.

"Dr. Cressy L. Wilbur, before the American Statistical Association in 1913, said:

"Vital statistics is the Cinderella of modern public hygiene. She sits in the chimney corner and sifts the ashes of dusty figures, while her proud sisters, bacteriology and preventive medicine, go to the ball and talk about the wonderful things they have done. But the Prince's slipper fits no other foot, and when we descend to fact, and not to empty bombast, about the results of administrative work, accurate vital statistics are our sole dependence. What do we know about infant mortality, which we are all so anxious to prevent, when not a single State or City in the United States has the data for a correct statement."

"In Kentucky the State Bureau of Vital Statistics has been aptly called 'Kentucky's

Big Family Bible,' and the newspapers have given considerable publicity to this unique and catchy designation. The success of the 'Model' vital statistics law in this State, is said to be phenomenal, and no doubt a large part of it is due to the widely heralded idea that the Bureau is the family bible of all the people, insofar as the recording of births and deaths is concerned.

"For the present, the subject of morbidity is with us not so pressing, for the reason that reports of contagious diseases, and diseases of other character, are not made with any greater frequency than are the birth reports and misleading statistics are not for that reason so easily derived. However, the deaths are recorded, together with the causes of death, which in the face of almost universal disregard of the obligation of birth reports, is productive of entirely false and misleading ideas of both morbidity and mortality. The commonly accepted method of stating infant mortality is as the ratio of children under 1 year of age to living births, and is usually expressed as the proportion of deaths during the calendar year to 1,000 living births during the same period. If in a city there were during any year 224 deaths of infants under 1 year of age, and if during the same year there were 2,000 births, the infant mortality rate would be 112 per 1,000 births, per annum. It is easy to see how, if all of these deaths are reported, and only half the births, the death rate will appear to be much greater.

"The present vital statistics law has a birth registration requirement, which, while not as full and as effective as the 'Model' law, does very well for the present. It at least provides a fine of not less than \$10.00 and not more than \$1,000.00, for failure to report births. The so-called 'Model' law was drafted in 1907, and was patterned after the Pennsylvania law. It has since been endorsed by the Census Department of the United States Government, The American Medical Association, The Public Health Association, and a host of other organizations interested in the subject.

"Birth registration failure lies in two directions. First, the medical profession, and the midwives, in their haste, and perhaps because of their greater concern in the safety of the patients, fail to make the reports; second, the municipal and county registrars do not insist sufficiently that these reports be made. Probably there will be fault to find in the matter of birth registration until the mothers of the State take the matter in their own hands.

There are a number of splendid pamphlets on this subject, which may be had for the

asking, and which will be of great benefit to any who are interested, or to any who may expect to discuss the subject before the public.*"

WHY I DO NOT ATTEND SOCIETY MEETINGS.

Too busy to go. My practice drives me day and night. Gee, I'm busy!

Too tight to go. I might miss an office call while there.

Too scheming to go. I see a chance to get one of your patients while you're there.

Too indifferent to go. The same old bunch still run things.

Too self-satisfied to go. My patients get well without my adopting your suggestions.

Too lazy to go. It's a long drill from my office to the meeting.

Too superior to go. I'm really in a class by myself as a doctor.

Too well informed to go. You fellows can't tell me anything.

Too shrewd to go. You might force me to pass out some of my clever therapeutics.

Too jealous to go. That infernal Dr. Knowsiz Stuff might get up and talk.

Too shallow to go. You might ask me for a few remarks.

Too mighty to go. Attend to your own business; I do as I please.

Then why in the world do you belong to it?

Oh, I may go sometime.

Want to belong to the leading bunch around here.

Want to be asked for my dues so as to give them out with a growl.

I like to show up and look like a live one when the college professors come.

Want to bring charges before the censors against you if I ever get a chance.

Am afraid I'll be sued for malpractice and want the benefit of your defense fund.

If I didn't belong, you fellows wouldn't stick up for the kind of stuff I pass out to my patients.

Tut, Tut, Tut!!! And to think they shot men like Lincoln!

- The Bulletin. Medical Society of Blair County, Pa.

*"Why Should Births and Deaths be Registered?"; the American Medical Association, 535 North Dearborn Street, Chicago, Ill. "Birth Registration"; the United States Department of Labor, Washington, D. C. "Vital Statistics"; the United States Public Health Service (known as Supplement No. 12, to the Public Health Reports, April 3, 1914).

SCIENTIFIC EDITORIALS.

PHYSIO-THERAPY IN SKIN DISEASES
AND SYPHILIS.

While great advances have been made recently in the improvement and simplification of the diagnosis of syphilis and diseases of the skin, the therapy of these conditions has not failed to maintain an equal rate of advance. In fact, the therapy of these diseases has been passing through a veritable revolution. The innumerable drugs and chemicals of doubtful efficiency are being displaced by a fewer number of really potent medicaments, and, what is of even more importance, the almost purely drug-therapy of the past is yielding to the introduction of physical agents. Even in those diseases for which there are so-called specifics, such as the mercurials, arsenicals, salicylates and organ extracts, physical means of treatment have been found to be most useful adjuncts, while it is indispensable in many of those conditions which are refractory to drug-treatment. Both internal and external administration of drugs still has its place and probably always will have, but we are discovering that with physical methods of treatment we can secure more prompt and certain results than if we depend upon drugs alone.

Among the various forms of physio-therapies, the following have seemed to us to be of chief importance: X-ray therapy, high frequency current, helio-therapy, electrolysis, electro-cauterization, diathermy, fulguration, ionization, super-heated air and massage, both direct and vibratory.

X-ray therapy stands at the head of the list as being the most valuable. While it has been abused in the past by men who have used it recklessly before sufficient experience with it had taught them its dangers and how to avoid them, it is now recognized as having a permanent and valuable place in the therapy of diseases of the skin. It is certainly true that up to within recent years X-ray therapy was very risky and uncertain, owing to the imperfections of the apparatus and methods, but to-day we can employ these rays, if we have the knowledge and proper apparatus and will take the proper pains, as carefully as any other agent. We can measure out the dose, just as we measure out the dose of a drug. The perfection of the means for measuring the quantity and quality of the rays are largely due to the work of Holznacht, Benoist, Schmidt, Hans Meyer, Sabouraud-Noire, and MacKee. But the ability to measure the amount of raying is only one-half the story, it is also necessary to regulate the dosage according to the disease and the patient. The skin

in different diseases reacts differently. Thus, in psoriasis short exposures of mild intensity are all that is necessary or required, while in epitheliomas intensive doses should be used; in acne the skin will tolerate only medium doses of the rays; in trichophytic infections of the scalp one thorough intensive treatment is well tolerated and more efficacious. Some patients are less tolerant of the rays than others, just as some people sun burn much more readily than others. Each case must be studied individually and treated accordingly in order to get the best results and avoid damages, and for this experience is absolutely necessary, as is also a knowledge of the theories of the action of the rays. According to Musser and Edsall, its effect on metabolism is not equalled by any other therapeutic agent and is manifested as an excessive elimination of the products of protein destruction, arising particularly from lymphatic structures. There are many dermatoses that yield to its use, for example, keratotic eczemas, mycosis fungoides, lichenoid affections and tuberculosis of the skin and glands.

The high frequency current, while not so destructive to pathological tissue as the X-ray, has also a wide field of usefulness in the treatment of stubborn dermatoses and neoplasms. According to the experience in electrotherapeutics of many dermatologists it possesses a remarkable cytolytic action on neoplastic tissue, whether ordinary benign, cancerous or tuberculous. Owing to its peculiar thermoelectro-chemical action it is of great value in the treatment of sclerotic conditions of the skin, particularly in eczematous and lichenoid affections. In herpetic, pruriginous and scrofulous conditions, in anal fissures and in vulva pruritus it is far superior to static electricity. It stimulates the lymphatic system and excites phagocytosis, thus having a remarkable influence on staphylococci and streptococci infections of the skin, although not itself a direct germicide. It also has decided cataphoric properties; with the aid of Morton's cataphoric electrodes the tissue can be easily saturated with such medicaments as iodine, mercury, and the salicylates. It is of great value,—in fact, has no superior,—in the treatment of alopecia prematura and other pelades. However, while as said before, this current is less destructive than the Roentgen rays, still it is by no means harmless, and long experience and careful study of the different phases of the skin are necessary to the proper use of this agent.

Helio-therapy or the use of ultra-violet rays in the form of Finsen light or Kromayer's lamp has been considerably employed of late, especially on the continent. In many dermatoses of a stubborn type, particularly in those

of tuberculous origin, it is claimed to be of great value. Like sun-light, it seems to have an inhibitory influence on the development of the tubercle bacilli in the skin, wherefore its effect on lupus vulgaris and lupus erythematosus. Naevi, it has been said, disappear rapidly under treatment with this light. However, it is capable of causing a more or less virulent erythema with pigmentation and its use should therefore be graded to the susceptibility of the patient's skin.

Electrolysis is another of the older and more widely used agents. Considerable skill is necessary in its use, otherwise considerable disfigurement from scars may result. It is undoubtedly of value in removing superfluous hair and small growths.

Ionic medication has been in use for quite a good many years now, yet still does not receive the attention that it merits. The introduction of drugs into the skin by this means is certain and rapid and the effect is produced where it is needed, in the skin, rather than merely on the surface of the skin. Iodine and mercury are the drugs most frequently introduced in ionic form, but there are many others which can be used in the same way. In those cases of psoriasis accompanied by arthritis the ionic introduction of salicylates over the stubborn patches has been of value, while iodine in scleroderma and mercury in syphiloderma accomplish material benefit.

Fulguration is a method of destroying pathological tissue by electric current, using an especially constructed electrode. Its main use has been in destroying stray cancer cells after removal of the mass of the growth or even in attempting to destroy the whole mass. It has, however, rather fallen into disrepute and is being used less and less. We formerly used it, but have not found it as useful as the electro-cautery which will do practically all that it will do, and more efficiently.

The electro-cautery is one of the best means for the destruction of small neoplasms of the skin and mucous membranes. It has the advantage of sealing the wound so that there is not nearly as much danger of spreading malignant cells as with the knife. It also tends to stop the bleeding, leaves comparatively little scar-tissue, and is not very painful if the cautery-points are always brought to a white heat before contact with the tissue.

Super-heated air has become more and more popular in the treatment of non-dermatological diseases, but has been neglected, as a rule, by dermatologists. This should not be since it is one of the greatest agents we have in many dermatoses where we wish to promote elimination of cutaneous toxins, cause vasodilation or produce analgesia. In atonic conditions of the skin, such as seborrhea sicca,

tuberculous and syphilitic ulcers, diabetic gangrene, and anal and vulvar pruritus it is of great benefit, while nearly all cases of psoriasis and keratotic eczema, accompanied by arthritic conditions yield to its use.

Diathermy has not yet been proved to be the valuable agent that some enthusiastic supporters of it claim it to be; we ourselves have used it, but have obtained superior results from other agents. It has been used in many conditions, particularly of a malignant type, but with apparently indifferent results. Its real value has not yet been established.

Massage is another splendid therapeutic agent which does not receive the attention it merits. Diseases of the skin with arthritic origin are greatly benefited by either manual massage or vibratory massage; especially valuable in these conditions is the use of the vibratory massage with frequent bakings with the hot-air apparatus. Scleroderma also yields to this combination, and it is of value here to employ fatty or oily substances on the affected areas during the massage. In those dermatoses due to neurotrophic and neurotic conditions, massage of the entire body has a reconstructive effect on the system of material benefit. It is also very valuable in atrophies and atonic conditions.

Are physio-therapeutic methods of any value in the treatment of specific affections? Undoubtedly of the highest value. We know that the prolonged use of the specific anti-leptic drugs is not without detrimental effect on the tissue; they become saturated with them and suffer from their inability to eliminate them with sufficient rapidity. Any means which will promote elimination is going to benefit the patient, and we can promote elimination with the high-frequency current, thermo-therapy, hydro-therapy, massage, etc. Moreover, there are the aids in administering the specific drugs so as to cause the least derangement of the system; by inunctions, vapor-medication, ionic medication and cataphoric medication we can get mercury directly into the tissues without having to allow it to pass through the alimentary tract with the consequent loss of the drug and derangement of stomach and intestine. The sometimes quite severe pains in the bones and joints can be controlled by hot-air treatment; the headaches will often disappear after the use of the high-frequency current over the scalp. There is even the possibility of aborting the disease itself by the use of the electro-cautery on the primary sore at a very early stage of the infection.

In conclusion, considerable as has been the increase in the use of these physical agents in

recent years, we consider that it is insignificant compared to the use that will be made of them in the future.

M. L. RAVITCH AND S. A. STEINBERG.

OFFICIAL ANNOUNCEMENTS

VITAL STATISTICS FOR 1915.

STATE OF KENTUCKY.

Population, 1915, 2, 387,875.

Total births	63,478
Total deaths	28,913
Birth rate per 1,000 population	26.58
Death rate per 1,000 population	12.11

DEATHS BY AGES.

1 year and under	4,730
1 to five years	2,242
65 years and over	7,454

PREVENTABLE DISEASE DEATHS.

Tuberculosis of the lungs	4,146
Other tuberculosis	526
Pneumonia-Broncho-Pneumonia	2,385
Whooping cough	187
Diphtheria-Croup	540
Scarlet fever	46
Meningitis other than tubercular	379
Measles	77
Typhoid fever	704
Diarrhoea-enteritis (under 2 years)	842
Diarrhoea-enteritis (over 2 years)	369
Hookworm disease	16
Influenza (lagrippe)	501
Puerperal septicemia	130

CANCER AND VIOLENCE.

Cancer	1,090
Violence	1,683
Pellagra	148

The Vital Statistics preliminary report for 1915 showing the number of births and deaths for the State, counties and principal cities, the number of deaths in each from tuberculosis, typhoid fever, and other preventable diseases, and from cancer and violence has just been completed by the Kentucky Bureau of Vital Statistics and submitted by Dr. W. L. Heizer, State Registrar.

There were registered during 1915, 63,478 births, and 28,913 deaths, giving a birth rate per 1,000 population of 26.6 and a death rate of 12.1. In 1914 there were registered 61,135 births and 30,139 deaths. Of these deaths for 1915, 4,730 were of infants under 1 year of age, 2,242 were aged one to five, and 7,454 were 65 years of age and over.

Consumption (all forms) caused 4,692 funerals, typhoid 704, diphtheria-croup 540, scarlet fever 46, measles 77, whooping cough 187,

pneumonia and broncho-pneumonia 2,385, diarrhoea-enteritis under 2 years (summer complaint of children) 842, dysentery (flux) in persons over 2 years of age 369, meningitis 379, lagrippe 501, and puerperal septicemia (infection of child birth) 130. Cancer was responsible for 1090 deaths and violence (all kinds) 1683.

There was a reduction of 1,226 in the total number of deaths registered in 1915 as compared with 1914, and an increase of 441 deaths from tuberculosis, 42 from diphtheria-croup, 125 from lagrippe, and there was a decrease of 290 from typhoid, 9 from scarlet fever, 189 from measles, 175 from whooping cough, 203 from the pneumonias, 500 from summer complaint of children, 117 from meningitis, 78 from infections at child birth, and 371 from other diarrhoeal diseases of people over 2 years of age. The registered deaths from cancer and violence showed a decrease in 1915 from 1914 of 38 and 323 respectively.

Preventable disease deaths were responsible for 40 of each hundred funerals in 1915 as compared with 42 for 1914.

The following tables give the total number of births and deaths registered in each county of the State for 1915. In a few counties and in parts of several, the death registration was not complete, and for this reason the State Board of Health has arranged to have an inspector investigate these violations of the law, and secure the arrest and conviction of those responsible for this neglect of duty.

County	Births	Deaths
Adair	503	190
Allen	448	173
Anderson	312	125
Ballard	338	145
Barren	687	314
Bath	457	166
Bell	888	316
Boone	198	97
Bourbon	332	296
Boyd	804	304
Boyle	362	206
Bracken	230	103
Breathitt	546	80
Breckenridge	585	290
Bullitt	215	132
Butler	485	142
Caldwell	364	153
Calloway	538	188
Campbell	1130	749
Carlisle	245	109
Carroll	205	100
Carter	930	235
Casey	558	176
Christian	782	679
Clark	398	263
Clay	693	136

Clinton	164	31	Muhlenberg	993	424
Crittenden	333	96	Nelson	540	236
Cumberland	468	87	Nicholas	219	115
Daviess	1077	572	Ohio	788	305
Edmonson	359	118	Oldham	139	118
Elliott	408	88	Owen	402	170
Estill	476	97	Owsley	288	56
Fayette	910	1131	Pendleton	266	160
Fleming	373	208	Perry	615	91
Floyd	811	154	Pike	1603	326
Franklin	392	292	Powell	209	71
Fulton	269	249	Pulaski	1028	356
Gallatin	93	64	Robertson	126	42
Garrard	336	139	Rockcastle	492	136
Grant	252	146	Rowan	391	123
Graves	992	325	Russell	376	116
Grayson	638	201	Scott	363	208
Green	301	107	Shelby	403	259
Greenup	780	240	Simpson	217	139
Hancock	175	98	Spencer	191	96
Hardin	548	277	Taylor	285	105
Harlan	577	146	Todd	378	205
Harrison	390	203	Trigg	361	190
Hart	529	222	Trimble	149	31
Henderson	743	419	Union	576	215
Henry	307	180	Warren	730	395
Hickman	323	122	Washington	417	163
Hopkins	889	424	Wayne	512	132
Jackson	476	69	Webster	527	234
Jefferson	4899	4314	Whitley	916	297
Jessamine	346	176	Wolfe	404	92
Johnson	750	180	Woodford	261	175
Kenton	1358	1041			
Knott	547	80			
Knox	904	285			
Larue	252	118			
Laurel	672	157			
Lawrence	726	214			
Lee	359	94			
Leslie	367	55			
Letcher	547	148			
Lewis	530	189			
Lincoln	481	235			
Livingston	299	104			
Logan	566	249			
Lyon	207	106			
McCracken	667	542			
McCreary	347	97			
McLean	410	137			
Madison	696	320			
Magoffin	586	164			
Marion	500	228			
Marshall	435	124			
Martin	290	71			
Mason	385	286			
Meade	312	129			
Menifee	203	52			
Mercer	365	181			
Metealfe	295	118			
Monroe	434	159			
Montgomery	320	183			
Morgan	637	176			

Intravenous Injections Without Distilled Water.—Ravaut relates that distilled water is not to be had in his service near the firing line. He has found that it can be dispensed with and ordinary contaminated water used without harm, by the simple precaution of pressing the tip of the syringe down on a wad of cotton at the bottom of the dish in which the water has been boiled. By aspirating the water thus into the syringe through the thick wad of cotton, the water is effectually filtered and he makes the intravenous injection without apprehension.

Typhoid Nephritis.—Deutsch relates that three persons in one house developed in turn acute nephritis with high fever. It proved to be the only local manifestation of typhoid fever. Typhoid bacilli were found numerous in the urine in one case the fourth day and also in the blood. The bacilli in all the cases were persistently serum-proof, not clumping at 1:50. The patients were children; the intervals between the cases were eleven and four weeks.

ORIGINAL ARTICLES

PERFORATION OF GASTRIC AND DUODENAL ULCERS.*

By IRVIN ABELL, Louisville.

Perforation of gastric and duodenal ulcers is the gravest complication occurring in their course resulting in death or disabling adhesions with disorders of function. It is said to occur in 4 per cent. of all cases and to be responsible for 80 per cent of the mortality of ulcer disease. This paper is based upon the observation of 14 such cases, 12 subjected to operation and 2 dying without operation, the diagnosis being confirmed by autopsy. Six were perforations of the stomach and 8 were perforations of the duodenum, all of the stomach and 7 of the duodenal perforation occurring in males, 1 of the duodenal perforations in a female. The youngest patient was 19 years of age, the oldest 63. Similar cases have been observed at all ages, from babes of a few months to the aged nearing the century mark.

In this series 1 was in the second, 2 in the third, 3 in the fourth, 5 in the fifth, 2 in the sixth, and 1 in the seventh decade.

Following the usual classification they are divided into three groups, the acute of which there were 7, all males; the subacute, of which there were 3, all males; and the chronic, of which there were 4, 3 males and 1 female. Of the acute perforations, 3 were of the stomach, and 4 of the duodenum: the stomach perforations were in the pyloric zone, 1 on the anterior surface and 2 on the lesser curvature; of the duodenal perforations all were in the first portion, 2 on the free anterior wall, 2 on the superior high up near the peritoneal reflection. Each of the 7 cases presented but 1 perforation, the holes varying in size from that of a darning needle to that of a lead pencil: 3 presented marked thickening and induration of the wall surrounding the perforation, the wall in the remaining four being comparatively supple and pliable. Six gave a definite ulcer history which with the typical symptoms of perforation permitted of diagnosis being made before exploration: in one case the operation was undertaken with a diagnosis of ruptured appendix: when the appendix was exposed to view it was apparent that some other lesion was responsible for the diffuse peritonitis: a piece of olive which floated into the operative field told at once its character and location. This patient, age 19, upon close questioning after recovery failed to give any symptom of gastric disturbance previous to the perforation.

Four of the perforations occurred during the night, 1 following an unusually heavy meal, 3 following a supper of usual proportions, 1 occurred while the patient was eating his noon day meal, 2 during working hours, 1 in the forenoon and 1 in the afternoon. With the exception of the 1 occurring in an overdistended stomach there were no circumstances bearing a causal relationship to the perforation. All 7 gave the usual symptoms of perforation; sudden agonizing pain in the abdomen, vomiting was present in three, absent in 4, varying degrees of shock, tense, board-like rigidity of the entire abdomen, in some cases most marked on the right side during the early hours following perforation due to a gravitation of the escaping gastric or duodenal fluids along the ascending colon: in the cases seen early after perforation there was little or no distention, the pulse was rarely over 100 and the temperature slightly below normal, normal or slightly above; the longer the time that had lapsed since perforation the faster the pulse rate and the greater the distention, commensurate with the degree of peritoneal irritation due to the escaping gastro duodenal contents, until complete relaxation of abdominal rigidity and marked distention preceded a fatal issue from peritonitis. Two cases, both gastric and both fatal showed much free gas in the cavity. Of the 7 cases 6 were operated on, the 7th coming under observation in a moribund condition 24 hours after, and dying 28 hours after, perforation; autopsy revealed gastric perforation with diffuse peritonitis.

Of the 6 cases subjected to operation, 3 were treated by simple closure of the perforation with Lembert sutures, covering the site of the closure with an omental fat graft, and draining the abdomen with a rubber tube inserted through a stab puncture in the midline above the symphysis. In the remaining 3, the perforation was closed in similar manner, same kind of drainage instituted, but in addition a posterior no-loop gastro-enterostomy was done. No effort was made to remove food particles other than sponging away those that appeared in the operative field. All were placed in the Fowler position and given continuous proctoclysis. The time that elapsed between perforation and operation was respectively 5, 8, 10, 17 and in two 24 hours. The 2 operated on 24 hours after perforation, both with simple closure and drainage, died, the remaining 4 recovered: of the 4 recoveries, 1 had a simple closure of the perforation, 3 had additional gastroenterostomies. At the present time 3 are entirely free of symptoms, 1 still notes sour stomach and epigastric fullness.

*Read before the Jefferson County Medical Society.

Of the subacute perforations, 2 were of the duodenum and 1 of the stomach. The latter occurred in a man of 50 giving an ulcer history of 15 years duration, characterized by pain, nausea, vomiting and haematemesis. Perforation had occurred 12 days prior to my seeing him, at which time he presented well marked evidence of a subphrenic abscess, the inflammatory mass filling the entire upper abdomen. Death followed 24 hours later without operation, autopsy revealing a perforated gastric ulcer with large subphrenic abscess.

Of the two subacute duodenal perforations 1 had occurred two weeks and 1 three weeks prior to operation. Both gave ulcer histories of mild type, the perforation being the first acute symptom in each instance. Both gave typical histories of perforation, the subsequent symptoms indicating the isolation and localization of escaping intestinal contents by peritoneal adhesions and exudate. At the time they came under observation, 2 and 3 weeks after perforation, both presented tender masses in the right upper quadrant, the remainder of the abdomen being free of physical signs. At operation both masses proved to be inflammatory in character involving the duodenum, liver, colon and omentum. Neither was disturbed and in both a posterior, no loop gastro-enterostomy was done. Both made good recoveries and have remained free of symptoms.

Of the chronic perforations 2 were of the stomach and 2 of the duodenum. None gave a typical history of perforation, all gave a typical history of prolonged ulcer disease varying from 1 to 10 years. Of the stomach cases, in 1 a perforating calloused ulcer was found on the lesser curvature, midway between the pylorus and cardia, the defect in the stomach wall being covered with gastro-hepatic omentum fat and glands thickened with inflammatory deposit; a sleeve resection of the stomach in its continuity was made, the patient recovering and remaining free of symptoms. In 1 a perforating calloused ulcer was found on the posterior wall of the stomach, high up near the lesser curvature and midway between the cardia and the pylorus. The defect in the stomach wall was circular, 1-2 inch in diameter, and closed by adhesion to the pancreas. A sleeve resection of the stomach in its continuity was made, the patient dying on the fourth day from an acute bronchitis with pulmonary oedema. No autopsy was obtained.

Of the 2 duodenal cases, in 1 healing of the ulcer and perforation had apparently taken place resulting in dense firm adhesions, involving the duodenum, liver, colon and omentum, producing obstruction with reten-

tion of stomach contents. A posterior, no loop, gastro-enterostomy was made followed by complete symptomatic relief. In 1 the ulcer was situated on the posterior wall of the duodenum, the perforation involving the head of the pancreas and common bile duct, producing colics and jaundice, simulating gall stone disease; the operation was undertaken with a diagnosis of common duct obstruction due to stone, the true condition being recognized on the visual examination. The site of the perforation was not disturbed, a posterior no loop, gastro-enterostomy being made. Five days later the patient presented shock and collapse, indicating internal hemorrhage, the blood began passing from the bowel ten hours later and continued to do so until her death, which occurred nine days after operation, and four days after the first signs of bleeding. No autopsy was obtained. While it is conceded that this hemorrhage may have had its origin at the site of anastomosis between stomach and duodenum, the period of time that elapsed between the operation and the hemorrhage, the suddenness and profundity of the symptom indicating profuse bleeding, lead me to believe that it occurred from the ulcer.

Of the twelve patients subjected to operation, 2 of the acute perforations died from peritonitis and 2 of the chronic perforations died, 1 from hemorrhage and 1 from pulmonary complications; 8 are living, 7 free from symptoms and 1 presenting evidence of digestive disturbance.

CONCLUSIONS.

Acute perforation is immediately fatal in over 5 per cent. of cases not treated by operation. Statistics show that over 50 per cent of such cases are being saved by operation; the percentage of recoveries should be materially increased by early recognition and prompt surgical treatment, the mortality, after the danger of the initial shock is past, increasing with each hour's delay due to the progressively spreading peritonitis. The nature of the operation should be determined by the character of the ulcer, the site and number of the perforations, the extent of the peritonitis and the general condition of the patient. The two essentials are closure of the leak and drainage. Where the perforation is inaccessible, either from its location or from the presence of surrounding adhesions which with the friability of the tissues due to the action of the gastro-duodenal secretions render separation unwise, gauze packs with tubular drainage offers the safest method of treatment. When the perforation is accessible closure with sutures should be employed; where the induration surrounding the ulcer

or its partial cicatrization produce obstruction of pylorus or duodenum or where the size and location of the ulcer is such that its infolding produces like obstruction, gastro-enterostomy is indicated; if the degree of peritoneal irritation and the condition of the patient permit, it should be done at the time of closure of the perforation, if such conditions do not permit, it should be carried out when the patient's recovery will assure a reasonable degree of safety.

In subacute perforations the treatment will necessarily depend on local conditions, where abscesses subphrenic, subhepatic or retrocolic are present the condition of the patient is such that drainage alone is indicated. Granting the recovery of such cases the advisability of further surgical measures will depend on the presence or absence of ulcer symptoms or evidence of disturbing adhesions or cicatrices.

In the subacute perforation in which no abscess exists it is best to let alone the protective barrier erected by nature around the damaged section and to make a posterior gastro-enterostomy; the barrier will care for the perforation and in many instances produce obstruction, the gastro-enterostomy will care for the ulcer and for the obstruction.

In chronic perforations the diagnosis of ulcer can readily be made before operation; in some instances the X-ray will permit of diagnosis of perforation, in others visual examination will be required for its recognition. The operative measures demanded for its relief vary with the site of the ulcer, the perigastric viscera involved and the presence or absence of obstruction. Resection of the ulcer with closure of the gastric or duodenal wound, pyloroplasty, gastro-enterostomy, and resection of the stomach or pylorus in its continuity will be indicated according to the lesions found.

The Various Causes of Falling Out of the Hair.

—Stein classifies these causes as they affect the hair itself or the hair-producing apparatus. The first group includes the infections, and the second the alopecia of neurogenous, toxic or cicatricial origin, and that from atrophy. There can be no doubt that purely nervous causes may induce the hair to drop out, or that reflex vasomotor disturbance from a fright may injure the papilla enough to kill the hair. Stein cites examples of each. Alopecia of toxic origin is general; the patches in syphilis are probably due to nests of spirochetes. Thallium given to arrest night sweats in tuberculosis is followed by a general dropping out of the hair for from one to three months. Then it grows in again. The fallen hairs are normal, showing that the alopecia is the result of toxic injury of the trophic center.

ENDOMETRITIS IN THE VIRGIN.*

By J. O. JENKINS, Newport.

Authorities are very reserved in their descriptions or discussions of endometritis as it applies to the young woman without any sexual experience, often dismissing the subject with the remark, "that it rarely if ever exists." Because of this dearth of information, the medical practitioner fails to lend as much attention to certain complaints brought to his notice by parents or individual patients as he should, and carelessly regards the aberrations of menstruation in this class of women as a matter of Nature which will in time clear up if let alone.

Many of the symptoms point to endometrial congestion or circulatory disease in a uterus that is developing under adverse physical or social conditions, which prove a bar to normal function. Cases are doubtless overlooked, cases which if analyzed would prove to be a simple congestive endometritis.

We are convinced, that many things occurring in the early menstrual life of the school girl and young woman, have an important relation to the health of the sexual organs and function at the time and in after life.

Some of the defects are developmental and relate to structure, while others are functional and are acquired either as a result of faulty growth or, in case growth has been normal, to social environment and the violation of the laws of health chiefly through ignorance.

Ordinarily, we understand endometritis to be an inflammation of the internal or mucous lining of the uterus. It is apparently divisible into three varieties: simple, infectious and specific, or simple, inflammatory and gonorrhoeal though this classification is objected to by some writers, who claim the disease is always due to an infection. Although this contention may be true in the large majority of cases, it is too arbitrary when applied to the disorder as affecting the young woman without sexual experience: here it must be a simple inflammation. This is not to say that the vulva and vagina do not offer an ideal route for the entrance of infection to the uterus or even to the tubes and ovaries, but that the probability of infection becoming a considerable factor in the endometritis of the virgin is very much less than that of the woman afforded sexual indulgence.

Barring accidents, we must still insist, that the disease in the virgin is of the simple non-infective form.

The pelvic congestion during menstruation which may have had variations from a nor-

*Read before the Campbell-Kenton County Medical Society.

mal standard, arising in the young saleswoman or factory operative become chronic in time, and produce changes in the circulation of the uterus thereby frequently inviting alterations in the endometrium. Such cases when direct infection can be ruled out, may be considered simple congestive endometritis, though the term endometritis is rather a misnomer. In the consideration of this distressing and too common disease of the virgin woman, a number of important questions arise as to its causes.

The conditions favoring the development of the disease are numerous and may apply with equal force to those cases of endometritis as it is found in the married woman excepting always the question of an infection and sexual relations.

Faulty development with consequent malformation of the uterus, or the presence of a long narrow cervix which obstructs the exit of the menstrual discharge may be material factors in producing the disease, as may other added features such as fibroid and other tumors and also structural conditions in adjoining organs and tissues.

As pathological causes, the family history and habits have a place: the presence of perverted function in neighboring organs; the secondary effects of other pathological conditions or abnormal positions of the uterus must be thought of. The disease may also be acquired by reason of trauma, social environment and economic stress.

A prominent cause lies in the gross ignorance of the nubile woman about her sexual anatomy, and the denser blindness of the mother or female guardian as to the importance of even conservative sexual knowledge. Lacking correct information themselves, they are not capable of imparting essential facts to the girl. The child is unprepared for the startling advent of menstruation or its physiological continuation and learns chiefly by experience, of the modifications it must make in her after life.

Another cause is, that combined with the transition period from girlhood to womanhood the girl is in the whirl of the intensive educational strain of the day, thrown perhaps on an organization already deprived of liberal rest, proper exercise and recreation, to say nothing of the demands of social life, injudicious costuming and fanciful accomplishments.

Questions of family economy conspire to prevent or limit a commendable physiological and hygienic life after leaving school. She must go to work, and no matter what the distresses of menstruation may be, she must be at her post or lose her job, so she holds fast to the job, suppresses her distress and de-

velops chronic uterine disease. The business office, establishment or factory present new problems, anxieties and habits and the relaxation from daily pressure, slight though it may previously have been, is curtailed or even abolished unless secured after nightfall or on Sunday.

Little wonder that the weakened physical structure is assailed by pathological, muscular, nerve and vascular disturbances.

In the study of the evolution of the body, especially of the generative system, particular attention should be directed to the properties of the ductless glands and to the effects of their secretions on the metabolism of the body; to the production of special or complimentary hormones and to the proper balancing of the latter in disease. The rapid advance made in the study of hormone principles and the definite amelioration of pathological conditions through their administration, leads us to believe, that one or more, or a combination of several has a decided governing power over sexual health.

At least two of these secretions have influence over the generative system and are important factors in ovarian and uterine disease.

In disturbances of the adrenal or the pituitary glands an unbalanced circulation is present, an item to be recognized in the sexual health of the nubile girl. In the persistence of the thymus and hypertrophy of the thyroid, we see interference with the nutrition of the sex organs. Hyperfunction of the aforementioned glands will precipitate early sexual maturity, while hypo function will delay it beyond the normal time.

Attention has been called to the commonly accepted causes of the malady, viz: personal habits, hygiene, social, educational and economic conditions, but behind these there comes to our mind, the query as to whether or not the tendency to the disease as well as some other affections of the genital system may not be the result of toxine accumulations in the mother during pregnancy. Or, that there has been an absence in the mother at that time of desirable elements important to the later developing girl.

Studies by Lanlois, Abelois, Sajou and others in the field of ductless gland therapy go to prove that the presence or absence of many stigma in the child are traceable to the activities of these organs during the period of pregnancy and to the elaboration of the special hormone. When the hormones are illy balanced in the young girl, for instance, that of the thyroid with its iodine and phosphorus element being plus; the thymus with its calcium content being minus and a high blood pressure due to disturbed hypophyseal or adrenal function, we have an ideal condition

favoring congestion of mucous surfaces, especially those of the uterus because of the intimate relationship existing between these glands, the ovary and other generative organs.

This disturbance of adjustment or balance is probably a preliminary to the development of many cases of simple endometritis in the young woman.

Recently, Cary Pratt McCord (*Jour. A. M. A.*, August 7, 1915) gives further important evidence as to the part played by the pineal gland in the development of young animals. He found that the administration of the pineal substance stimulated growth of the body and encouraged an early sexual maturity. Another cause is the ever-recurring surgings of sex. The girl's psychological nature is reaching out to the future in the dim distance. She pictures her motherhood and the happiness of a home where she is mistress. Like a powerful magnet the vision draws all her forces toward the realization of the one great object in life and long courtships, the civilities of association with the opposite sex, the presence, the contact, honeyed phrases, banterings and acceptable liberties of the chosen one create an indescribable pleasure to her and stimulate the circulation to and in the sex organs.

To one of nervous or hyperneurotic organization, the hyperemia thus engendered may result more or less disastrously in the production of the metrorrhagias of an endometritis.

We feel our position to be correct on this proposition for we see many of these cases cured by marriage, which is the realization of the burnings, desires and dreams which have previously tormented her daily life. Sexual association is here the one remedy above all others.

As an outgrowth of uncontrolled or misdirected sexual surcharge the girl may develop the habit of masturbation or some other sexual vice which is often fatal to a normal menstrual life, as well as being objectional from a physical and mental standpoint.

These are matters well worth bearing in mind when a case of metrorrhagia or menorrhagia presents itself. Two forms of simple endometritis may be recognized, one in which the mucous membrane has undergone hypertrophy and the other where there is an increase in the number and size of the utricular glands, though both forms may exist in the same individual and at the same time, one histological feature or the other predominating and indicating the type. The curette will show a multiplication of the capillaries and an extensive increase in the connective tissue network. The latter may be more noticeable

at certain localities than at others the prominences forming fungoid or polypoid processes.

The second variety is denoted by an increase in the number and size of the utricular glands and their excessive activity, giving rise to a more or less constant mucoid leucorrhoea. The epithelial and glandular cells proliferate and undergo alterations in shape, the swollen and distended ones compressing their neighbors. Hence many large round cells may be seen in the microscope field as well as those assuming the spindle shape from compression. Sometimes, in the more chronic type of the disease, the stroma is found to be thicker and denser than normal.

A further overgrowth may implant itself on the above, and hypertrophic endometritis be the result though this is rare in the virgin.

If the girl belongs to the industrial class, the accumulations of fatigue poisons or toxins, whose removal is one of the duties of the adrenal gland, may further emphasize the intensity of the disease. It would seem that many of the subjective symptoms of endometritis in married women are applicable to the disease in the young woman, any difference existing being of degree only.

The cardinal symptom of endometritis is hemorrhage from the uterus. This may assume the form of a menorrhagia whereby the duration of the normal flow is prolonged, or of a metrorrhagia where a flow occurs in the interval. The regularity of the date is often anticipated or, the flow may start on its regular date, stop a few days and then return profusely.

Dysmenorrhoea may or may not be a feature, but if present, has no relation to the disease unless the endometrium has undergone a polypoid change. Leucorrhoea in the interval is quite common.

The blood picture of one group will generally show a hydremia and relative anemia under the microscope with low hemoglobin content: while another group will possibly show the opposite though anemia may be also present.

A physical examination when consent can be obtained, does not aid us much in the diagnosis; a slight tenderness of the uterus on palpation, or the determination of a moderate degree of enlargement, is perhaps all the information secured.

Other symptoms such as lassitude, headache, backache, breathlessness, muscular weakness and fatigue, disordered vision, sleep and digestion, hydremia, anemia and nerve instability, etc., are generally secondary effects, but are also common to other grave systemic disturbances.

A confusing vicious cycle is established which sometimes renders a diagnosis difficult.

In arriving at the latter, protracted, profuse or intermittent menstruation and uterine leucorrhea must be our chief reliance though a few cases of dysmenorrhea due to a long narrow cervix may present serious complications.

The prognosis is generally good provided the physician recognizes the difficulty in its early stage and can effectively impress on the patient the gravity of the situation and secure her hearty cooperation in timely and continued treatment, for without the latter failure is almost an assured fact.

The general treatment of endometritis in the young should be along lines calculated to restore the weakening body to the normal standard.

If she is living in crowded quarters or among unsanitary surroundings she should be removed to a more ideal locality, and an ample, well-selected, nourishing diet provided. Much attention should be given to the function of the skin and body by means of baths, massage, and judicious exercise.

It is very important to induce regularity of the bowels and kidneys and to obtain normal action if possible without the use of drugs. Fatiguing or exhausting occupation of whatever kind must be given up.

Several days before the anticipated menstruation the patient should go to bed and remain there until entirely over it, thus relieving the pelvic organs of the burden of hydrostatic pressure and minimizing the congestions. All abnormal positions of the uterus should be corrected; a constricted cervix dilated and an abnormally long one amputated.

The introduction of a permanent cervical pessary after dilatation will sometimes be of much benefit provided its presence does not produce too great irritation.

Hydrotherapy is productive of considerable benefit, the cold bidet pack applied once daily—best at bed-time—acting as a stimulant tonic to the relaxed superficial blood vessels and tissues. The hot pack is not so useful because of its initial relaxing effects though more agreeable; to those whose systems react promptly, the morning one minute cold shower followed by a brisk friction at the hands of an assistant, is a very proper procedure. Where it is possible to do so, packing the vagina with tampons saturated with antiseptic astringents in glycerine, will accomplish a certain amount of good by both the support they give the weakened structures, the depletion of the congested tissues and the tonic astringent effect on the blood and blood vessels. But local treatment in a young girl is not so very desirable if it can be avoided.

Aside from those drugs intended to overcome the anemia and its effects, remedies accomplish little. To act on the hemorrhagic features ergot in some form, tincture cannabis indica, the viburnum and hydrastis may be given in full doses. Quite a satisfactory remedy is gallic acid in 5 to 10 grain doses given every two or three hours while the flow is at its height. Pure calcium chloride in from 5 to 15 grain doses is sometimes useful. Drugging, however, is often extremely disappointing and leaves much to be desired.

Along the line of serotherapy and organotherapy the injection of several doses of serum might be tried and pituitrin or adrenalin administered in conjunction with some form of iron to improve the haemic condition. A combination of the several ductless glands substance is indicated as corpus luteum gr. 5, thyroid gr. 1, thymus gr. 1. The above given three times daily increasing or diminishing either of the substances according to effects produced would supply a deficient hormone and contribute to a better balanced nutrition of the system.

For a direct attack on the abnormal circulation and structure of the endometrium the X-ray and radium hold first place among medical methods. Their action stimulates the growth of fibroid tissue and consequent endarteritis which effectually seals the source of the hemorrhages. Great care should be used in X-ray applications, however, lest more harm than good be done. Numerous cures have been reported through their use and our personal experience has been quite satisfactory.

Faradism and galvanism produce so few lasting cures that their use is little beyond a diversion; occasionally some success may be attained but the effects are usually evanescent. In undeveloped organs, however, some permanent degree of success may be attained due to its stimulation of muscle nutrition.

The application of live steam, strong caustics and all intra-uterine treatment is too dangerous to the patient's life to be trusted to any one except an expert and then performed at a hospital and under the best aseptic conditions.

It seems almost unjust to relegate to surgery those cases which fail to respond to our well-meaning efforts, and the family physician would be remiss in his duty, did he not first try out his case to a judicious degree. However nothing is left him in some cases except surgery, and even here, expert curettement sometimes fails even after several repetitions. Curettage may be done and the hypertrophied endometrium thoroughly removed and the denuded surface swabbed with Churchill's iodine, carbolic acid or like rem-

edies hoping to induce a healthy restoration of the tissue. If failure results, the operation may be repeated once or twice hoping nature will finally rally her forces and stimulate the growth of a normal mucous membrane. But if the morbid process continues there is danger in delaying more drastic measures and radical steps should be advised without further delay.

A certain number of cases on account of a dyscrasic, dormant systemic conditions or active complications will persist and foil all the best directed efforts of cure. It is well, in such instances to revise the patient's family history: an inherited feature among the female members to abnormal menstruation or a haemophilic habit may be uncovered which will explain the defect.

In those individuals where the haemorrhage is so profuse and persistent as to endanger life, and who fail to show material improvement under the treatments outlined, we have no hesitation in advising a hysterectomy as a cure. This is of course, an extreme measure, but under the circumstances society should be content to accept half a woman rather than no woman at all.

THE USE OF IODINE AND THE IODIDES IN MEDICINE.*

By E. W. JACKSON, Paducah.

In view of the broad field which the subject of "Iodine and the Iodides in Medicine" embraces and the important information which has been gained concerning the use of these agents during the past few years, it is manifestly impossible for me, within any reasonable length of time, to cover the field of their usefulness in detail, it will, therefore, be the purpose of this paper to briefly consider in a general way, a few of their most salient points.

Iodine excluding its salts, is most frequently employed in the form of the tincture and may be used either locally or internally.

Locally it is irritant and antiseptic, the degree of its action depending upon the concentration and length of time in which it is left in contact with the parts.

As a therapeutic irritant, iodine is a useful remedy and in some conditions seems to be almost a specific, yet, it is not a panacea and like most all other remedies, has its short comings and disadvantages which cause it to suffer in comparison with remedies possessing qualities which render them especially suitable in certain conditions.

It may be applied superficially for the purpose of producing a congestion at the point of

application, in order to stimulate local reparative processes, for example, it is often effective in hastening the absorption of inflammatory deposits. It may be used to produce a congestion at the expense of some nearby congested part or in other words to partially shift the area of congestion from diseased to non-diseased tissues, thereby, playing the part of a counter-irritant, as in a synovitis, where it may be applied to the joint surface to detract the excess of blood from the inflamed structures. It may be injected into a serous cavity in order to produce an adhesive inflammation, which would cause a union of its walls, thus obliterating the cavity, as an example it may be injected into the cavity of the tunica vaginalis to cure a hydrocele.

As a germicide it stands preeminently among the best, probably having less pronounced undesirable effects upon the tissues for its degree of germicidal effectiveness than any antiseptic in use to-day, and although as such, it has been in use only a comparatively short time, its extreme degree of efficiency together with its simplicity of application and rapidity of action has caused it to become a prime favorite in the antiseptic world.

It has practically displaced the long and tedious methods of preoperative treatment of the surgical field, which prior to its introduction had been held as absolutely indispensable, furthermore, it has made possible the carrying out of many surgical procedures under such adverse conditions and surroundings as would hitherto have been a serious obstacle to any hope of success, and since the recognition of its value, as an antiseptic, it has been productive of a decided improvement in the methods of treatment and results obtained in emergency surgery. So extensively has it been used in the present European conflict and so effective has it been in lessening the horror which has always characterized the military hospital, that, it has been referred to as the iodine war.

Whether it will ever have to yield to the superiority of any other antiseptic, the future will tell but in any event the fact will remain, that, it was left to iodine, to demonstrate the possibilities in rapid and thorough antisepsis and mark the beginning of a new era in antiseptic surgery.

In preparing a field for operation the tincture rubbed over the dry surface affords a quick and safe method of sterilization, preliminary scrubbing with soap and water is not only unnecessary but is a disadvantage as water inhibits the action of iodine, the preliminary use of benzene, however, is an advantage, as it removes the oil from the skin and permits of a more thorough penetration by the iodine. When used upon patients with a

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delicate skin, it is advisable to remove as much of it as possible by gently rubbing the surface with alcohol, immediately following the operation to minimize the irritation.

In recent wounds where the surface continuity is broken, the tincture of iodine applied to the parts offers the very best means of preventing infection. In abrasions of the skin and incised or lacerated wounds, even though they may be dirty and greasy, a thorough swabbing with iodine without any previous washing and scrubbing is far superior to any of the laborious and prolonged methods of cleansing and sterilization heretofore in use. Punctured wounds should at least have iodine applied superficially and if the possibilities of infection of the deeper structures justify it, the wound should be sufficiently enlarged to permit of its application to all of the injured parts. Iodine has greatly improved the results in the treatment of compound fractures and dislocations, in these cases when it is applied to the injured structures the soft tissues will usually heal without infection and the other processes of repair take place in due time, instead of having a long period of suppuration with delay in repair which formerly attended these injuries in a large per cent. of cases.

It is an effective germicide in already existing infections in which cases the tincture may be applied to the infected surface or when irrigations or antiseptic dressings are indicated a weak solution answers the purpose in an admirable way. It is also very effective in some of the parasitic skin diseases, particularly ringworm.

The most spectacular and radical use to which iodine has ever been put, is the method of using it in peritonitis, as introduced to the profession by Dr. E. J. Johnson, now of Memphis, Tenn., and so firmly advocated by himself and Dr. J. A. Crisler, also of Memphis.

According to this method the infected area of peritoneum, whether it be localized or diffused, is flooded with a two and a half per cent. solution of iodine in alcohol, the principal precautions being to make sure that it is all covered and that all operative work is carried out in an immersed field. In addition to the curing of peritonitis, one of the chief advantages claimed for the method is, that the causative pathology, such as a gangrenous appendix may be removed, without endangering the surrounding healthy peritoneum. Drs. Johnson and Crisler have reported hundreds of cases in which they have employed the method together with the Fowler position and Murphy treatment with wonderful success and not the slightest evidence of it causing any harmful results.

The method both as to its safety and therapeutic value is seriously questioned by many, and since the first report upon its use, it has been the occasion of much comment which has ranged all the way from extreme skepticism to the most enthusiastic endorsement. But in justice to the method it must be admitted that for the most part the criticism has come from those who haven't used it, while the praise has come from those who have seen practical demonstrations of its use, however, it must be further stated that reliable and conscientious men who at first opposed it have since tried it out without always being convinced of the rationality of its use. Dr. Louis Frank, of Louisville, who was at first not inclined to favor it but has since used it, writes the following, "We have used iodine locally with the unsoiled structures walled off, and the only difficulty we have seen where it has been used in infected areas thus localized, is, that the discharge or period of suppuration is prolonged." My personal observation of its use has been limited, during my interne service in the Louisville City hospital, I saw it used in two or three cases by Dr. F. T. Fort, and recently I have had occasion to observe its use in several cases operated upon by Dr. P. H. Stewart of Paducah, and while one can never positively tell how cases which have recovered following this treatment would have terminated without it, I believe both of these gentlemen would bear me out in saying, that, as far as conclusions relative to the therapeutic effect of the method were justifiable, the results were highly satisfactory.

Iodoform is another iodine preparation which has been extensively used in the treatment of infections, especially those which are all, or in part, beneath the surface and more in particular those of tubercular origin.

Internally, iodine has for years been used as a therapeutic agent in the management of many diseases, although it was used with a definite understanding of the underlying principles involved in its pharmacological action, but this was merely one of many instances in which a practical empirical result was attained in advance of any explanatory knowledge of the manner in which it brought about the desirable changes. Recent work, however, along this line by such men as Macht, McLean, Jobling and Peterson has been productive of much valuable information.

It was formerly believed that the action of the iodine content of the iodides was altered by its state of combination and that iodine administered in the form of an iodide had a different action from that administered in the uncombined state. By investigation, it has proved, that, these salts do not exert their influence upon the system in a molecular way

but that the combination is broken up and each drug liberated before systemic action takes place, and the action thus obtained is the resultant of combined action of the component parts. Notwithstanding this fact, it is not to be assumed, that there is no advantage in giving the iodine in a state of combination, as it is in this way less irritating than the uncombined iodine, and larger amounts are tolerated, permitting of a maximum iodization which a minimum degree of gastro-intestinal irritation, and with the inorganic salts, we also obtain the action of the basic constituent which is often beneficial.

Upon the gastro-intestinal tract, it is of course, irritant and antiseptic, as an irritant it is seldom, if ever, indicated, except that it may in part be this property that occasionally makes small doses effective in the vomiting of pregnancy. An antiseptic it may be given well diluted and in this way it has, within recent years become rather popular with many physicians in the treatment of typhoid fever.

Iodine is frequently serviceable in promoting the absorption of necrotic and incompletely organized products of disease, such as granulomatous deposits, inflammatory exudates and blood clots. This action of iodine has been credited to many effects which it has been supposed to have upon the metabolic processes.

As an explanation of this action, much argument has been put forth to prove that iodine combines with and neutralizes certain agents, which when left in the free and active state serve to prevent solution and absorption of these morbid products. It is also supposed to cause an increased lymphatic activity, which would aid in absorption.

In syphilis, iodine which is usually given as an iodide is very valuable in the tertiary stage, as it causes the removal of the syphilitic deposits and thereby relieves the symptoms produced by them and at the same time sets free the organisms contained in and protected by these lesions, thus exposing them to the action of such agents as mercury and salvarsan.

It is useful in promoting absorption of pleural and pericardial effusions, and in hastening resolution following pneumonia. It may also be used to an advantage in some cases, to aid in absorption of the blood clot resulting from cerebral hemorrhage.

For many years it has been generally considered, as an established fact, that the iodides and especially the potassium salt are, when given over a period of time, serviceable in bringing about a reduction in the blood pressure, and as a means of meeting such an indication, they have been extensively employed in the treatment of many chronic diseases

in which the high pressure is a symptom and more in particular those diseases which have an arteriosclerotic condition for their foundation.

In syphilitic arteriosclerosis, it is admitted that the chief virtue of the iodides lies in the ability of their iodine content to remove the vascular infiltration. Aside from this, the subject is unsettled, some investigators claiming that iodine reduces the pressure by diminishing the viscosity of the blood, thereby lessening the resistance and permitting it to flow more freely. Others have claimed that instead of iodine having a depressing action upon the circulatory system, it is a stimulant and the lowering of the blood pressure which results from the administration of potassium iodide is due to the depressing action of the potassium constituent which causes a depression of the heart and a relaxation of the blood vessels.

Whatever their mode of action may be, it is a clinical fact, that they render much service in reducing the high pressure in a large per cent. of cases, and they should be given, when such indications arise.

There has been a great deal of attention given to the influence of iodine upon diseases of the thyroid gland and while there is still some difference of opinion concerning its *modus operandi*, modern work has done much towards taking it from the field of empiricism and causing it to be considered from a scientific viewpoint.

In the thyroid enlargements the usefulness of iodine is as a rule, limited to those cases which are not attended by manifestations of hyperthyroidism, and even in those, the results are not always the same. In some cases it has no effect whatever upon the enlargement, in others it will cause a reduction in size without any harmful effects and on the other hand it may show a tendency to cause an excessive glandular activity and be the starting of a hyperthyroid condition from a physiologically harmless gland. In the diseases which are accompanied by a hyperthyroidism, it will in a very large per cent. of cases only, serve to aggregate the trouble, by augmenting the formation of iodothyronin which is already being formed in excess of the required amount.

In any of these diseases, when iodine is to be employed, the effects should be carefully watched and at the first evidence of an unfavorable result, it should be withdrawn.

Iodine seems to act well in some cases of myxedema by aiding in the formation of the necessary amount of iodothyronin.

It is frequently effective in causing a reduction of the glandular enlargement which

sometimes tends to persist, following such diseases as measles and whooping cough.

It has been recommended by some in the treatment of tuberculosis but the disadvantages of producing an absorption of the tubercular tissues and preventing the formation of a protective connective tissue wall around the lesions, thus liberating the bacilli, would in all probability more than offset any antiseptic action which it might have upon them.

Iodine in part, is eliminated by the bronchial mucosa and when given just to the point where the irritation acts as a stimulant, it assumes the role of an expectorant and in this capacity it will often render good service in the treatment of chronic bronchitis.

DISCUSSION.

P. H. Stewart, Paducah: I consider Dr. Jackson's paper an extremely interesting one. Regarding the use of iodine as a therapeutic agent, I am not very familiar with it, and I am not as familiar with it from a surgical standpoint as I hope sometime to be, and as I desire to be. I have had some little experience in a surgical way with the use of iodine. I believe that iodine in surgical asepsis ranks almost with ether as an agent which affords relief from pain. I believe that it occupies a field and position in surgical antisepsis that salvarsan does in syphilis. It is almost, if not a specific as a local antiseptic. It is recognized all over the surgical world, and has been given very great prominence in the European conflicts now in progress, so much so that every soldier before he is sent into the battle line is supplied with a sterile ampule of iodine to be used immediately upon the receipt of a wound in the line of battle. As a sterilizer of the skin it has no equal. I have used it in wounds upon the hands and different parts of the body, and it acts as if by magic in preventing sepsis. I have had some little experience with it in the peritoneal cavity in suppurating appendiceal conditions, and my experience with it in that line has not been sufficient to form any definite conclusions. However, in my judgment it is advantageous. I know you are able to go into a pus cavity, clean out the pus, remove the appendix, and the patients will recover in cases in which they did not before. What effect the Murphy proctoclysis and Fowler position may have in this technic I do not know. The mortality from suppurative appendicitis and from peritonitis has been materially reduced by these two means, but it is hard to estimate exactly what effect the iodine has. I have not had sufficient experience to form an opinion as to what effect iodine has upon peritoneal surfaces. I have not had any cause to regret its use, but I do have a fear that the local application of iodine to the free peritoneum as a preventive to infection might result in the for-

mation of adhesions which might in the future give trouble.

Curran Pope, Louisville: Just a few points in reference to this excellent paper and to one part of the discussion. Please do not forget that in the surface application of the iodine or tincture of iodine, that you also have another antiseptic, the alcohol, which has the property of covering and closing in superficial abrasions, and in the next place, please bear in mind that iodine in my humble opinion has no place in the treatment of syphilis save at one point, and that is in the after treatment to absorb any neoplastic gummatous condition the patient may have had, and with all due respect to my friend from Paducah, I want to say that I do not consider salvarsan, neosalvarsan, mercury, or any other medication in syphilis a specific.

P. H. Stewart: I think I used the word almost.

Curran Pope: I want to assert and reassert that syphilis never dies. It sleeps, as said the elder Fournier after an experience with nearly 100,000 cases. Think of it, and further it has no place whatever in the treatment of tabes or paresis. It always does harm, a position I took in an article in 1894, and which I have had no reason to change form since then. Avoid iodid of potassium or soda in the reduction of blood pressure if you can, as it means up-setting the gastro-intestinal tract. Exercise to perspiration, or perspiratory measures, diet, rest, and the D'arsonval current will do far more for you in high blood pressure than all the drugs in the pharmacopeia put together. Try those things.

John Rowan Morrison, Louisville: In regard to the administration of iodids in high blood pressure or arteriosclerosis, I doubt very seriously whether it has much influence in reducing blood pressure, but Dr. Janeway pointed out that it has beneficial effects in diverting the blood current in its minute distribution. We observe a great many cases clinically in which it has had a good effect. I have not had a great many cases, but in those I have had the iodid has had an excellent effect. I have not used the current in these cases as much as I should have done perhaps, but in those in which I have used it it has had a good effect. We cannot always use the current, and so we have to depend upon iodine which is good. Some recent work was published in the Johns Hopkins Bulletin in 1914 by Dr. Mott of the clinic effect of the iodides. He says that the iodid of sodium stimulates both blood vessels and the heart; that the potassium ion depresses the heart and relaxes the blood vessels; that the iodine ion stimulates both the heart and blood vessels, and this would be of some value in the administration of the iodid for the reduction of the high blood pressure or for absorption we had better use iodid of potassium according to the experimental findings of this man, who says that

the potassium and the iodid may be used to advantage.

A. D. Wilmoth, Louisville: There are two or three points in the doctor's paper I heard which are of interest to me, and it is the surgical use of iodine I wish to refer to.

Those of us who were present yesterday and heard Dr. Murphy allude to the master technician, Mr. Lane, in his work of bone plating in certain lines of fractures, and those who have had the pleasure of seeing him work, will realize absolutely the importance of the use of iodine in an aseptic field. He dips his rubber gloves in iodine after he puts them on his fingers, using an instrument in dipping them in the iodine if he has the slightest doubt about his instruments or field of work. Those who use iodine know that it is a rapid method of preparing the abdominal field or of any field for that matter. You can rely absolutely on the iodine if you re-apply it to the skin surface; it does not last longer than fifteen or twenty minutes. I have used iodine extensively in the abdominal cavity following the recommendation of Dr. Crisler, of Memphis, in a paper read by him before the Southern Medical Association at Lexington. Immediately following that, I opened the abdomen of a baby with acute appendicitis which was filled with pus at every point without the slightest effort having been made on the part of Nature to limit the area involved. In that case I used it. I happened to be fortunate enough to have a sister in the operating room who worked for a long time in Memphis and she aided me in carrying out the treatment. I have used it a number of times—I do not recall the exact number of times—in the abdomen. I have used it *ad libitum*, pouring as much as a pint of the alcoholic solution into the child's abdomen, washing it around in every conceivable way as Dr. Crisler recommends and advises in his paper. You must make it reach every point of the abdominal cavity, every inch of the peritoneum, and the viscera must be reached to get good results. I have had excellent results in the use of it.

One point touched on by Dr. Stewart is an important one, and that is the possibility of adhesions occurring in the abdominal cavity if the viscera are allowed to come in contact with the iodine. On the surface as we use it in the painted field. I have had occasion to open the abdomen more than once where iodine was used extensively for the cure of ventral hernias, as you drain all these cases. In opening them up again for the relief of ventral hernia I have been surprised to find that adhesions did not exist.

Frank T. Fort, Louisville: I want to commend Dr. Jackson's paper. Some five years ago I met Dr. Jackson in Chicago, at which time he told me that he and Dr. Crisler had been experimenting on dogs for a year or two and had reached their fortieth case where they had used iodine in

the abdominal cavity. Dr. Jackson convinced me that it was a good agent, so the first case I had after returning home was one of general peritonitis complicated by rupture of the appendix in which I used iodine. To my surprise the patient got well. As far as I know, it was the first time iodine was used in the abdominal cavity. I went on the staff of the City Hospital, had several cases and Dr. Jackson assisted me in operating on them, and we did not have a death where we used iodine. Of course, it is impossible for us to ever tell which patient is going to die and which patient is going to get well regardless of the treatment pursued. I have never had any trouble from the use of iodine in the abdominal cavity. It acts as a stimulant and tides the patient over shock; it blocks the lymphatics and stops the absorption of toxins that are produced. That is the principal reason that Dr. Jackson and Dr. Crisler use it in the abdominal cavity. It produces an albuminoid and securely blocks the lymphatics from further absorption of the poison which leads to the general poisoning and death of the patient. Ever since I have been in practice I have used iodine locally in my railroad work and my corporation work. I never use water, but use iodine, I do not care how greasy or how dirty or nasty the wound looks, I mop it thoroughly with iodine, and dress it with the assurance that I am going to get good results and get healing by first intention. In open joint wounds, I have, much to my surprise, several times had these wounds heal by first intention by the use of iodine.

I recall a case recently where a boy got caught with a mower, and the joint between the astragalus and the tibia was opened, or rather the joint between the scapoid and the astragalus was opened. I used iodine, sutured it up as best I could, and it healed by first intention.

Leon L. Solomon, Louisville: Just a word, concerning the marked difference, observable in the old iodids and in iodine of to-day.

First, I call attention to the iodid of potassium, the iodid of sodium and the iodid of strontium and then to the other more recent iodid preparations, in bland, unirritating form. Of the latter, there are in daily use a number of preparations of domestic and foreign origin and I take occasion, at this particular time to commend modern chemistry and the chemists, who have, in more recent years, done so much for iodine therapy. Much of iodine medication, which formerly was impossible, because of irritation, is now possible, because we have preparations, available for both external and internal use, no longer so irritating, as to make them intolerable and impossible. I wish to especially stress and emphasize the value of iodine, internally, in septic conditions. We have heard much from the surgeons which we accept as true with regard to the action of iodine externally, in inhibiting microbial growth and in destroying micro-organisms. Now I want

to emphasize a point, that has not, thus far, been brought forward, namely, that iodine internally, in septic conditions is borne, in large doses, and apparently with great advantage to the patient. For this purpose, choose a preparation, which you are sure the gastric mucosa will tolerate, and increase the dose, from day to day. Most septic patients bear iodine, internally, well and I believe with signal benefit, often times.

President Kincaid, Catlettsburg: Some ten or twelve years ago a paper was presented on iodine as an antiseptic in surgery by Dr. J. E. Cannaday, who was from Kentucky originally. At that time he was in charge of the Sheltering Arms Hospital in the coal fields of West Virginia. That was, I believe, the first time my attention was particularly called to the use of iodine for that purpose. It was a very valuable paper, and in the light of the present use of iodine it is an interesting thing we have been neglecting, and yet our attention was called to it ten or twelve years ago.

E. W. Jackson, (Closing): I have nothing else to add other than to thank the gentlemen for their discussion.

THE DIAGNOSTIC SIGNIFICANCE OF PAIN IN THE CHEST.*

By H. C. CHANCE, Cumberland Gap, Tenn.

We will start by saying that alone and unsupported by other signs and symptoms it has no diagnostic significance, and can only be a symptom that causes us to investigate the patient's condition more fully. I shall confine myself to the cavity and walls above the diaphragm and say first that chest pain may mean anything from grief or hysteria to angina or mediastinal cancer.

Pain sense is very different in different people is the first caution I wish to promulgate. So much is this so that some will complain bitterly of a little pain from indigestion or other minor cause while the next patient may not complain very much with true angina.

As a rule pain is located in the same place as its cause but in this region we have more referred pain than in any other portion of the body. Also we have many neuralgias in various parts of the chest contour.

The varieties of pain here contrast very little with other sections of the anatomy. We have the sharp or acute pains here that are characteristic of inflammation of the serous and synovial membranes. Also the shooting or radiating pains of neuralgia from a neuritis or nerve pressure.

Dull pain is like a bruise which usually means inflammation of a mucous membrane or

lung tissue—these being rather poorly supplied with sensory filaments.

Paroxysmal or remitting pains are usually colics or neuralgias. Shifting pains more or less acute mean rheumatism, hysteria, locomotor ataxia or trichinosis.

Gnawing or boring pain is usually significant of osteal or periosteal inflammation in the bony parts of the chest wall and are rarely referred as to the ribs but sometimes referred forward in disease of the vertebra. This type of pain also means aneurysm, carcinoma and sometimes gout and lithemic states.

Cramping pain will be passed over as we have but little of it here. We have a very severe burning pain in zoster. Aching pain of myalgia as elsewhere.

Throbbing or pulsating pain means abscess or circumscribed inflammation, here as it does elsewhere.

Pain increased by motion characteristic of inflammation of serous and synovial membranes is the same here as elsewhere.

Also disease or injury of bone as ribs and vertebra. Pain here as elsewhere may persist from "nerve habit" long after the removal of the cause.

*As I have already said that there are here more exceptions to the rule that pain corresponds closely to the location of the causative factor than usual we will consider pains in the relations to diagnosis by their location and give most of their probable causes as we go and thus we may be not caught unaware, as I have been many times. Considering of course the many phases that individual cases may show and trying to be sure; first that our patient has pain and again bearing in mind that it may be very much more or very much less than he wants us to believe it is.

So we will localize our pains as follows; beginning in front: Pain above left clavicle may be due to a diseased colon or diaphragm.

Precordial pain may be true angina and usually radiates down the left arm and has many other well-marked signs by which it may be recognized, in fact I can't conceive of its being mistaken for anything else.

It may be a pseudo-angina from gastric trouble. It may be anemic, neurasthenic, toxic, or grippal, functional disorders of the heart, myocarditis with degenerations, aneurysm, or rupture of the heart, valvular defects especially aortic, thrombosis of the pulmonary artery, pyrosis, gastralgia, gastritis, arsenic poison, flatus in splenic colon, gout, hysteria, epilepsy, or locomotor ataxia.

Sternal or substernal pain may mean:

Bone disease of sternum or vertebra, disease of stomach, bronchitis, aneurysm, acute aortitis—very rare; angina pectoris, medi-

*Read before the Bell County Medical Society.

astinal tumor or abscess, enlargement of bronchial glands, foreign body in a bronchus, la grippe, tabes, spinal apoplexy, pernicious vomiting of pregnancy—a very bad omen.

Pain in a breast may mean pregnancy, normal or ectopic, ovarian disease, hysteria, mammary neuralgia, sometimes menstrual, or some diseases of the mammae as fissured nipple, abscess, obstructed duct, lobular fibrosis, cyst, or finally carcinoma.

A pain in or through the shoulder, right or left may mean, rheumatism, synovitis, neuritis, cervico-brachial neuralgia, diaphragmatic pleurisy, new growths of adrenals, dilated stomach, duodenitis, colitis, loaded colon, left shoulder; and acute pleurisy.

Pain in lateral chest wall may be pleurisy, new growths of pleura, pleurodynia, intercostal neuralgia (usually on the left side from the sixth to ninth rib), disease or injury of the chest walls as ribs or soft tissues, acute pneumonia with accompanying pleuritis, pericarditis, thoracic aneurysm, herpes zoster usually soon followed by the characteristic eruption, and nearly always on the right side, overloaded colon, flatulence, phthisis with accompanying pleurisy, vertebral disease, mediastinal tumor, enlarged bronchial glands, anemia, and hysteria.

Posteriorly, pain in the nape of the neck may mean rheumatism, laryngitis, neurasthenia, cerebro-spinal meningitis, cervico-occipital neuralgia, hemorrhage into the spinal meninges, tetanus. Pain across the first three dorsal vertebra may mean diaphragmatic pleuritis or pericarditis.

Top and back of right shoulder is usually indicative of aortic disease, carcinoma of liver (at angle of scapula), gallstone colic, hepatic disease, or aneurysm of innominate artery.

Mid-dorsal pain means; flatulence (very common), caries of spine, aneurysm of descending aorta, rheumatism, gastric ulcer, all irritative conditions of stomach including gastritis and gastric atony.

There is also a pain one to one and a half inches to the left of the ninth and tenth dorsal that is associated almost invariably with splenic inflammation.

This covers about all the varieties and localities of pain we have in the territory I have mapped out to cover, and I believe that we have almost as many of these that are due to causes away from the signal as to causes seated where the pain is complained of. That gives us the duty when confronted with a pain in the chest to get busy thinking.

Sometimes a chest pain like pain anywhere else may demand immediate relief and a later diagnosis, but the investigation should always be made as thoroughly as possible, re-

membering our topography as carefully as at any other part of our anatomy. It is so easy to call all sharp pains, with fever, pneumonia, and all others neuralgia, that we must be more careful in our diagnosis of painful disease here. We should always go over every possibility and by excluding any disease that has not its cardinal symptoms in addition to the pain we can usually arrive by exclusion to a correct appreciation of the pathology of this complexly filled cavity.

The limits of my paper do not allow me to take up the concomitant symptoms of the diseases I have mentioned as being capable of producing chest pain nor do I think that was the idea of the committee who gave me this subject and if I have aroused enough curiosity to cause you to investigate any pain you find in the chest and follow it to its lair; I feel that I have accomplished my purpose.

We must also bear in mind that some very severe pathological conditions of the chest are characterized by the pain being referred to other parts; as pneumonia in children shows very severe abdominal pain in some cases and has been mistaken for appendicitis, gall-bladder inflammation and sub-phrenic abscess, while aortic failure is frequently accompanied by severe pain in the vertex and occiput, but I will go no further on this line, it not being embraced in my paper's title.

Parathyroid.—Korezynski describes the clinical picture of parathyroid gastro-enteritis as observed in a recent series of thirty-two cases and discusses treatment. It must be along the same lines as for typhoid and acute gastro-intestinal catarrh. The diarrhea usually responds to kaolin or charcoal. Prophylaxis requires sanitary supervision of provisions and notification of all cases, even single ones, tracing them to their source. The public should be shown at every opportunity the connection between food and parathyroid infections. During the same period he encountered forty-one cases of parathyroid pyelitis, with or without involvement of the bladder, all in women. The pyelitis develops with chills, high fever, and pain usually radiating forward and downward. Nausea and vomiting are characteristic features of the syndrome, and herpes is common. The spleen was never enlarged in these paratyphoid pyelitis cases, but a leukocytosis between 8,000 and 14,000 was constant. No local or internal measures seemed to display much efficacy. The rest and warmth of keeping constantly in bed, supplemented by copious drinking, gave most relief, and the fever never lasted for more than a week or two.

ROENTGENOLOGY.*

By W. E. IRVIN, Owensboro.

The X-ray, as you all know, was discovered by Roentgen of Germany, in 1895. While it was an accidental discovery, yet it was the outcome of long years of scientific research and experiment. Crookes, of England, by experiments developed a glass tube which he exhausted to the thousandth part of an atmosphere and then sealed. This tube produced a beautiful light, when a stream of electricity passed through it, but no physical or therapeutic effects. Some years later this tube was improved by exhausting it to one-millionth of an atmosphere.

A few years later, in 1895, Roentgen was experimenting with this tube by passing the light through some platino-cyanide or calcium crystals when he observed that these crystals became illuminated while the ray passed through them. He did not at this time know what he had found.

These experiments were conducted in a laboratory where fresh photographic plates were stored. When these plates were used by photographers for making ordinary pictures they were found to be fogged and also showed shadows of nails.

These nail pictures proved to be the result of the ray passing through wooden boxes, in which the plates were packed for shipment, causing the picture of the nail to appear on the photographic plate. This was an astounding discovery that startled the world.

In a short time these shadow pictures were utilized by making radiographs, skiagrams or Roentgenograms, as you may prefer to call them, of various parts of the body. At first these pictures were used only for diagnosing fractures of bones and foreign bodies lodged in the human body.

This has been improved upon and gradually extended until many diseases of the body are diagnosed through this agency. Especially is it useful in confirming an uncertain diagnosis in many cases, either by showing certain pathological conditions to be present or absent. In diseases of the bones it will show an abnormal growth or inflammation of periosteum, or in the more serious forms of bone disease it will demonstrate the presence or absence of pus in osteitis, osteomyelitis. It will also show the peculiar diseased condition of the bone in osteo-sarcoma.

Mr. Frankel, of Leipsig, a noted surgeon, states that the Roentgen ray removed pelvic adhesions. In five hundred post operative examinations when the X-ray had been used, he

found 75 per cent. of them free from adhesions.

In a case of abdominal section for tubercular peritonitis, which had been X-rayed afterwards, he found the abdominal organs free from adhesions when he operated for appendicitis one year after the abdominal section.

It is claimed it will remove the adhesions following pleurisy and pleuro-pneumonia. As the Roentgen ray treatment of these conditions is yet in its infancy, it is well to remember this remedy and give it a trial, after we have failed with other remedies.

In many diseases of the alimentary canal we can get Roentgenograms showing stricture of oesophagus, stomach or intestinal canal, ulcer of stomach and cancer. Also, the point of obstruction in intestinal obstruction. This is accomplished by administering subcarbonate of bismuth by the mouth before taking the skiagram.

The bismuth makes a shadow which outlines the walls of the alimentary canal, thus enabling you to see many things which are hidden from the naked eye. Thus you can eliminate certain suspected diseases or confirm your diagnosis of disease in a positive manner.

In obscure cases we all know what great gratification follows a clear and unmistakable diagnosis.

Another important field for the use of the Roentgen Ray is in the treatment of skin affections. Acne, eczema, lupus, epithelioma, syphilis, all yield to the proper use of the X-ray.

Some German Roentgenologists within the past two years have taught the use of the X-ray in the treatment of fibroid tumors of the uterus. This treatment has been used by Roentgenologists in Philadelphia and decidedly successful results obtained. I have used it in three cases with success in two and benefit in one. A woman with a bleeding fibroid just before the menopause, was cured without any benefit. After twelve treatments with the X-ray was cured. I used the Albers-Schonberg technique, high vacuum tube anteriorly over uterus for ten minutes exposure, alternating with same exposure over sacrum, with three to four days intervals. The treatment thus extended over a period of six weeks.

Case No. 2. Enlarged bleeding uterus, fourteen treatments. No benefit. Hysterectomy, myoma, recovery.

Case No. 3. Bleeding uterus cured in eleven treatments.

This same treatment is recommended in chronic hemorrhages of uterus after thorough curettement has been performed without curing the patient.

Von Graff reports forty cases of pathologic-

*Read before the Daviess County Medical Society.

al uterine hemorrhage treated by the Roentgen ray, ranging from twelve to forty years in age. Results, twenty-three permanent cures, eight recurrences, five failures.

Contraindications are hemorrhages due to cystic degeneration of ovaries, post abortion diseases of adnexa and syphilis.

TO EPITOMIZE

All non-malignant diseases should be eradicated.

All malignant diseases should first be operated and then rayed.

The advantages of the Roentgen ray are:

It is painless.

It avoids the shock of a surgical operation.

It preserves to a certain extent the internal secretion of ovaries.

It does not require confinement to bed.

It does not interfere with the regular duties of the patient.

The menopause is brought on gradually when necessary.

The amount of treatment can be graded to the needs of the patient.

CHRONIC HYPERTENSION.*

By A. E. THRELKELD, Wheatley.

When the sphygmomanometer began to come into more general use for the recording of blood pressure, it was thought that all that was necessary to be done was to find means for the reduction of hypertension. Experience has taught us that hypertension is simply a symptom and that many times like fever or pain, its reduction is not the best thing for the welfare of our patient. Verily to reduce hypertension is not its treatment; to maintain it will often be our task, as in cerebral arteriosclerosis and initial interstitial nephritis, in which increased blood pressure is indispensable, and in which efforts to reduce tension would aggravate the condition.

Generally we are called upon to treat only those over forty years of age. It is our duty however, to warn the young men against excessive use of tobacco, coffee, intoxicants; excessive muscular efforts without regular training; food bolting, late hours and irregular meals. To the young woman, to warn against late hours, endless social gatherings with tea, coffee, chocolate, etc., insufficient water drinking, faulty attention to many inner necessities at the expense of outside appearance.

Among the toxins that cause hypertension the purin bodies stand high. Whenever the proteid metabolism is disturbed, or after excessive eating of meats, cheese, eggs and the like, the tissues are flooded with toxins that

cause hypertension. The quantity of such food is not the only consideration. There is another side to this meat question. What is the patient's digestive power of such food, both in the stomach and by pancreas. Let us look well to the diagnosis and treatment of any condition along this line.

Briefly, I might enumerate some of the causes of hypertension. Excessive food intake, engorged liver, chronic loading of distended colon, gas in stomach and colon, intestinal stasis, omental fat, sedentary habits with nervous strain and worry, long continued muscular exertion without sufficient time for rest and repair.

In the treatment of this condition hygienic and local measures are of more avail than medicinal. In the regulation of diet sufficient food should be taken for the systems caloric need. A diet adapted to the motor and secretory functions of the individual stomach; regulating the bowels with or without laxatives, moving them in the forenoon and relieving colon of gas in evening by warm enemas; further attention to flatulence with habitual use of carminatives; abdominal massage and possibly application of sinusoidal current, for which a very beneficial effect on intestinal atony is claimed. Within bounds of reason a sufficient amount of outdoor exercise is beneficial. Warm bathing is good both morning and evening; sleeping in a warm bed with abundant ventilation.

Extremely important but almost commonplace is the necessity for liver regulation. There are influences productive of hypertension that are to be mastered only by our intelligent conduct of our patients.

It seems beyond doubt that mental overactivity stimulates the pituitary gland and adrenals which throw pressor substances into the circulation. What lack of sleep will do, and the absence of relaxation of the brain (which is the characteristic of worry), what influence must be attributed to the well known though ill-admitted fact that *libido sexualis* especially in man in the modern high life existence, can only be presumed. All considerations combined, it seems that hypertension must be treated more during the hours the patient is away from work than when he is at it. It is well nigh impossible to direct the mighty current of business life as long as ambition is met by limitless opportunity.

As to hours of sleep it should be understood that carbonic acid is of high pressor power, that sleep in ill-ventilated rooms will interfere with metabolism during one-third of our lifetime, a time additionally spent in digesting and assimilating of the heaviest meal of the day.

Invariably for reasons above given persons

*Read before the Eagle Valley Medical Society, at Sanders, October 13, 1915.

with hypertension would do well to eat light evening meals, with ease thereafter for a few hours, then take a moderate amount of exercise, a warm bath possibly a warm enema and sleep in a warm bed with windows wide open.

In dealing with general obesity a good deal of caution is needed. We can not reduce too rapidly or to too great an extent the abdominal adipose tissue, without interfering seriously with abdominal pressure and thereby making our patient worse instead of better. As hypertension is due to a narrowing of the total cross section of blood channels, and change in any of these large areas of circulation will have its decided influence, especially in areas of skin, of musculature and abdominal viscera. Warm bathing is beneficial and any means of keeping patient warm especially in winter. Wintering in the South is good for patients that can afford it.

Our individualizing acumen is severely taxed to know just what to allow and what restrictions to make in individual cases. One to three cigars a day, or no cigars; one cup of coffee, or no coffee; a little alcohol, or none; a little work, less work or complete rest. We will have to exercise our best judgment according to the varying condition of our patients.

The drug treatment of hypertension occupies a secondary place. The iodides are very generally used. Do they or do they not reduce blood pressure? I can not say. But since patients generally have to be treated for long periods it is probably well to continue their use. Theobromin and diuretics are often of benefit. The nitrites will often be needed.

Chloral, veronal or medinal may be needed at times to procure sleep and relieve the patient who is kept awake by the hard pounding of heart and pressure in the carotids.

In the senile heart with or without hypertension, digitalis is an ideal drug and should not be withheld on account of its pressor power. A good deal of this hypertension already compensatory is due to nervous stasis. With rest, massage and depletion, the use of digitalis for a few days, guarded by some nitrite, will tone the myocardium and bring about improvement. In times of great nervous excitability the bromides will be of service. Let us not forget that constipation must be corrected by any and all measures at our command.

Let us remember that hypertension in many cases is compensatory and must not be reduced, that in patients who have had high blood pressure for some time it would not be wise to attempt to bring this down to the normal for the patient's age, but simply to make a compromise with nature. A lapse

from a too high to a too low pressure is a very serious proposition with which to contend.

When the crest of this wave of hypertension which has struck our profession, will have passed away leaving in its wake many a shattered notion, the level of our useful knowledge, will have come to a more adequate management of this pathologic condition. May we learn and teach not to grow old before our time, for that is what chronic hypertension means. To depress hypertension in the aged is to take the wind out of his sails, which carry his life boat into the haven of rest; to reduce the hypertension in the man from 30 to 50 is, to save him from shipwreck as he is passing the cliffs and hidden rocks on the gateway to the more mature life.

SURGERY IN THE COUNTRY.*

By BOB OVERBY, LaCenter.

Surgery in the country has a three-fold purpose, especially the saving of life, relieving suffering, the restoring of blighted hopes and prospects to a life of influence and maintenance. So important is a country doctor in his community that perhaps, he might be compared to the shepherd of his flock, with that ever watchful eye, meaning much to those who rely upon his counsel for physical restoration and guidance.

Right here, let us ask ourselves the question, are we doing our full duty for our dependent ones in pursuit of that ever increasing exacting knowledge of this subject, and are we meeting the issue as creditably as we should. I have my serious doubts about this. The country doctor doing general work must have wide open eyes, ears, an individuality of pronounced type, because surprise and the unexpected he must constantly meet. Right here is where his seed sowing requires splendid selection, because his skill, judgment, and conduct will be held to strict accountability from the standpoint of the laity and profession. In the selection of this subject I first want to say that I make no pretenses in doing surgery, especially, only doing that character of work I feel conscientiously able to do. I feel we are not doing the work we are entitled to do, and should do. The fast advance of hygiene and sanitation has brought about such a notable reduction in amount of general practice, that the financial side of general practice only looms up in no flattering outlook to the general practitioner of medicine. And to, while I believe and venture to say that doctors, generally, are upon a much higher foundation of efficiency and equality than they have been heretofore.

*Read before the Ballard County Medical Society.

It seems but proper and right that we should equip ourselves to do a great deal of the general surgery we have usually been passing up to the fellows who are always delighted to receive it. It goes without saying that hospitals have a selected and cherished place in which the greatest things are being done every day, and too, there are a great many things that should not be attempted outside of one; but, when distance, time and conditions have sway, what are we to do and these are the factors that confront us often; especially is this true with many doctors in partially settled sections without proper counsel and assistance readily accessible.

I shall not attempt to draw the line of demarcation between country and hospital cases. The purpose of this paper is not to bring out a discussion, versus city and country surgery, but to justify surgical interference in selected cases in the country.

The first consideration of paramount importance is diagnosis, what is to be done, can you do it, the time of day or night, distance of counsel, equipment, surroundings, and consent.

With all these things settled and you have been rocked and lulled in the cradle of asepsis from your college day to the present moment, I believe we are justified in doing a large part of the general surgery we are called upon to see. If criticism ever has a place and is justified, surely it belongs to those anti-surgery scare-crows who dote on nature having its course, wait till morning, who take three days to recognize a case of appendicitis.

Conservatism is and should be the guiding influence of every man who does surgery, but there is a dividing line; symptoms and conscience should determine procedure. I have seen and known of many cases of appendicitis, for instance, to end with death or practically so, for the need of a doctor who did not trust nature with an appendiceal abscess, who did not trust in "wait till to-morrow," with purgatives, prayers and the uninformed.

To better illustrate the factor of time, what it means to wait, I want to present the following: One night last winter I was called to see a boy about twelve years of age, about seven o'clock in the evening, people entire strangers to me. The father, when I called, said he had a boy grunting around two or three days with his stomach, didn't think there was much the matter with him. An arrival the patient was lying on the bed knees flexed, playing with his small sister beside the bed. I noticed him grunting occasionally, after inquiry found he had been complaining with his stomach three days but had been up, however. Examination revealed the elevation of temperature, flexed legs, with extreme ten-

derness in the region of appendix, constipation, etc. Only a minute or two was spent at the bedside. I at once, with the father and mother retired to another room for deliberation. I informed them of the condition, of which they could scarcely imagine such a thing possible. I especially advised the operation that night, the danger was too great to wait the long winter's night till morning. I advised the operation and was consented to readily. I at once called Drs. Usher and Johnson, the ground being covered with snow, asked them to come in haste telling them the nature of the trouble. It being eight o'clock and a rising temperature of the patient, the sterilization and preparation of room and etc., was rushed, requiring some two hours after the arrival of my consultants.

No time being lost, about ten-thirty by the aid of a gasoline lamp (which was excellent) the patient was anesthetized. By this time the patient's temperature was one hundred and one, pulse rather rapid. The abdomen was opened in the usual manner. No difficulty was experienced in delivering the appendix, which was gangrenous, very foul odor, and ruptured on first attempt to deliver it. Was absolutely rotten. Abdomen was closed with drainage placed. Patient put to bed in the Fowler position in about as good shape as when put on the table. Patient's temperature was normal next morning and remained so. Patient made a perfect recovery.

The point of interest was the high time pathology was playing in this case, what would have become of this patient's chances to have waited till the long winter's night had passed.

The next case, and my first one, was an excellent gentleman and friend of mine. Mr. R. had consulted me a time or two complaining of indigestion, said he had been troubled for eight years, giving the usual symptoms of indigestion had very gradually lost weight and feeling bad generally. He said he had gone the usual rounds with no improvement. I don't remember that he gave any history of suffering especially, other than distress in the stomach, which was not constant. During his last illness I was called to his home, and, after careful examination (and too, his pain was more acute than heretofore) I told him I was sure that he had appendicitis, which fact he accepted. Dr. Meshew was called in, who responded promptly and concurred in the diagnosis. He said, however, that if he had appendicitis he wanted me to operate on him at once. Dr. Johnson was called to our assistance. With the usual preparation and sterilization completed the patient was anesthetized. The incision was made at McBurney's point.

On opening the abdomen such a mass of adhesions one rarely sees. The appendix was difficult to locate, for the fact that from base to the distal end was entirely covered with a smooth band of adhesions resembling normal tissue. It was necessary to dissect through this band to locate its presence, and it was exceedingly tedious to dissect out. It being a very hot day in June, my first case, my blood pressure having reached an alarming state, I thought it would surely get my angora before finishing the job. However, after considerable time anchored a fibrinized organ with a small amount of pus, the wound was closed in the usual manner, patient made a fine recovery after two or three days vomiting of considerable quantity of bile. Has since gained considerable weight and is enjoying the very best of health.

Another case, a negro man I was called out to see one morning, said he had suffered with a severe colic in the night, vomiting, pain, marked tenderness in the right side. I told him his trouble. He wanted an operation, which was done in his home about eleven o'clock. About an hour before preparations were complete, he had a rigor and his temperature reached 101.2 or 102 when the anesthetic was started. After the abdomen was opened, one of the largest and longest appendices was easily delivered, but careful manipulation was imperative as it was intensely distended with pus. Nothing of further interest save patient made a speedy recovery.

Another case: a young lady suffered during the night with pain in the abdomen. I was called early next morning, found the abdomen tender in the region of the appendix, diagnosis of appendicitis was made, operation advised at once and accepted, done as early as assistance and preparations could be had. Nothing of special interest save annoyance from one of deep stitches, an abscess developed and drained, discharged several days. Patient entirely cured and enjoying excellent health.

Mr. M., married. I was called about midnight to see him, not being at home was attended by another physician, who gave him a hypodermic of morphine which partially relieved him of the intense pain he said he suffered. I saw him next afternoon about four o'clock at the solicitation of his father. I found him quiet, no pain, but an unusually tender abdomen, temperature 100. Diagnosis of appendicitis made and operation advised it once, and accepted. It was an unusually bad day, was late, so I advised taking him to the hospital to facilitate time. I anticipated pus; these grave symptoms indicated to me there must be no time lost. He was carefully conveyed to the station on a spring cot on a

wagon and was soon at the hospital where all arrangements had been made in readiness by Dr. Rivers whom I had called by telephone, and who assisted me in the operation.

The patient's temperature was already climbing, increased pulse rate. The abdomen opened, a tedious state of affairs presented themselves. The tissues surrounding the appendix and it, as well, were enormously thickened, and the beginning of a gangrenous state confronted us. It proved to be no easy task to recognize the presenting parts, it also proved to be a funnel-shaped cecum, a condition I had never seen with such thickening, distortion and matting together, the appendix was with difficulty separated and removed. It contained two large enteroliths.

Drainage was placed, the abdomen closed, the patient made a good recovery after traveling a rough road for a few days. I want to express here my appreciation and thanks to Dr. Rivers for his services in this case.

These cases mentioned here, represent the cases of special interest. I have had several others I will make no mention of as they were of no special consequence. Two years past was called in consultation with Dr. Rollings to see a gun-shot wound of leg; a negro boy about twelve years of age, had received the entire charge of a No. 12 gauge shotgun, taking effect in the boy's ankle joint, from a distance of four or five feet, literally tearing the member to pieces; leaving nothing but amputation under most unfavorable conditions.

We operated out in the yard, no utensils for sterilizing but biscuit pans. Had but little infection, patient went on to a splendid recovery.

Have done tonsilectomy in several cases with complete recoveries, the enucleation method was employed with capsules completely intact. This is a line of work not difficult especially to do in many cases. However, there are some cases that I would not undertake. I select my cases and choose only those that I feel no hesitation in doing. Hemorrhage is the most dreaded feature to arise, but with the many means of controlling hemorrhage and a good anesthetist, one should feel no hesitancy in doing the operation. Many other cases such as ischiorectal abscess, empyema, gun-shot wounds, knife wounds, are mentioned only to pass up at this time.

The last type I will mention is intubation. This is an operation not done as much as it should be, I know. This I have done four or five times, and if anything I have ever tried to do brought joy and happiness to my heart, I believe relieving a suffocating child by the use of the tube has been the greatest. Intubation is not a difficult operation to do, and can be done with credit by any one, who makes

any pretensions at surgery. It does require considerable tact, and especially patience and judgment, upon the part of the operator. One reliable man assistant, who does not lose his head, is strong and not afraid to hold as requested to do, is the most important need of the doctor in doing intubation. I beg to report that every case intubated has recovered promptly.

In closing, I want to beg the hand of criticism will fall lightly on my efforts, remembering that the saving of useful lives is the great object in view, lives that have their place and responsibilities. Remembering, too, the aversion of hospitals that handicaps a great many we have to deal with, and, too, the lack of financial means, and by far too often, the advance pathology present, remembering that transportation to hospitals is foolish to contemplate. And for this class especially, country surgery stands preeminently supreme, and is often enough the court of last resort; and to sit idly by and look sad won't save them. Do something for them, you can.

THE USE OF PITUITRIN IN MEDICAL AND SURGICAL PRACTICE.*

By D. W. GADDIE, Hodgenville.

That an extract made from the posterior lobe, or the infundibular portion of the pituitary body of the lower animal, has, when given to man, a mysterious, yet powerful influence over certain pathological, as well as physiological conditions, cannot be successfully denied, yet we are completely mystified when we attempt to tell why or how its action is so powerful, so sure, yet so strange.

We cannot tell just how its scope of usefulness is so wide, extending from the prevention of post-operative intestinal paralysis of abdominal sections, post-partum hemorrhage, epistaxis and hemoptysis, to its splendid use in completing, in haste and with safety to mother and child, the second stage of labor.

Your essayist would not convey the idea that a personal experience in the treatment of the various conditions mentioned is sufficient to justify a declaration favorable to the use of the glandular extract, in so many and varied indications, but begs to confess, with pleasure, that much information was gleaned from the recorded experience of medical men from various parts of the world, each report serving to create within me a desire to know more of this remedial agent.

Surgeons of much experience claim that after laparotomies it is a good and safe practice to give, hypodermically, from one-half to one c.c. of pituitrin to prevent delayed peris-

talsis or intestinal paralysis, and to also promote the secreting and voiding of urine, rather than resort to diuretics and catheterization. The immediate effect is to create both the desire and ability to urinate. It is also indicated during or after surgical operations when very low blood-pressure indicates the approach of profound surgical shock, as its effect is to raise blood pressure at once.

As a satisfactory remedy for the relief of alarming epistaxis and hemoptysis many give testimony. Very recently in my town, a young lady, who was rather frail, yet not considered tuberculous, awoke with a slight cough accompanied by a profuse hemorrhage from the lungs. Her physician used morphine and ergotine hypodermically, and such other remedies as are commonly used, but the hemorrhage continued to an alarming extent, till finally, it gradually ceased after the loss of much blood. In about one week a second attack occurred, and about ten days later a third. At my suggestion, between the second and third attacks, her attending physician was prepared for the next hemorrhage, which was the most severe yet witnessed. He gave her hypodermically one c.c. of pituitrin. The hemorrhage ceased at once, and has not since returned. Pituitrin contracts the arterioles, by stimulating to quick action the muscular coats of the pulmonary blood vessels, thereby cutting off the supply of blood from the wounded lung tissue. It acts as a powerful and an immediate stimulator of involuntary muscles.

The writer's personal experience with the use of pituitrin is more extensive in obstetric practice than in all other lines, as I have used it quite frequently during the past two years. It has been used in those very common cases where the os-uteri is dilated, and when the normal expulsive pains are not sufficient in force to expel the ready and waiting foetus. With only one exception that I now call to mind, the second stage of labor has been completed in from three to thirty minutes after giving the hypodermic. I should think that fifteen minutes would be an average time, thus saving the woman much pain, and very happily and safely terminating delivery, without violence to the perineum, with no post-partum hemorrhage as a subsequent complication.

In placenta previa centralis, after version has been performed, or in placenta previa lateralis, without version, pituitrin will hasten delivery, and thereby give to both mother and child a better chance to survive the terribly hazardous ordeal. In my search of the literature I have not seen that anyone has noticed the absence of after-pains in multipara, following the use of pituitrin. For more than a

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year, it has been my observation that no after-pains occurred, even in those women who had suffered much following previous labors.

I have reported this fact to other physicians in my vicinity, and requested them to report to me their experience. Their report coincides with my experience, which makes me feel safe in proclaiming pituitrin useful in preventing this very annoying and unnecessary complication.

To those who have not used pituitrin, I advise its careful and judicious use. To those who have not gotten the best of results from its use, I suggest a more careful study in the selection of cases, and the time of using this wonderful and powerful aid in both medical and surgical practice, believing, as I do, that its field of usefulness is wide, and that it is one of the indispensable glandular extracts.

MANAGEMENT OF THE NEWLY BORN.*

By E. L. GOWDY, Campbellsville.

In presenting this paper the only apology I have to offer, excepting its crude rendition, is the simplicity of the subject. It is true in medicine, and in everything else, that the seemingly simple things are often the hardest, as every doctor knows that the most mediocre procedures must be carried out with greatest caution lest carelessness of detail bring about an unfavorable outcome. We watch the maneuvers of a professional baseball player, the wonderful punch of a prize fighter or the action of a billiard expert; it all seems so easy that after a few minutes we cease to marvel and will become disgusted at some unintentioned error. Story writers produce more tales of adventure than any other kind of composition because their construction seems the simplest and easiest of all fiction and therefore the most entertaining; yet there are not many tales that compare with Robinson Crusoe or Treasure Island which hold their charm because of their simplicity, and Gil Blas and Don Quixote have few comrades in their wanderings. One gazes upon a painting by Raphael, a sculpture by Praxiteles or the calm proud beauty of the Parthenon; it all seems so lucid, so obvious, characterized by such a lack of effort that one wonders how it could be otherwise. Millions of dollars are invested in theological seminaries and college to train young ministers in the teachings of Christ which are so simple that even a child can understand. The new-born babe is so pitifully helpless, so utterly at the mercy of someone else, yet its development is so certain, so sure and so simple that it has become such a common miracle its manage-

ment is often completely lost sight of. Even the parent, a farmer for example, will use utmost care in the preparation and planting of his crops, and in spite of this care and attention he will worry about drouth, blight, and other things that might happen to it, in most instances expecting something to happen to make his harvest short. On the other hand, if his baby has plenty to eat and a good digestion he ceases to worry about it at all, he does not expect it to get sick and when it does he wonders why.

Thus it is that while a great deal is written yearly on the care of the mother during pregnancy and puerperium, many medical advisers, so long as the new baby lives and moves and has its being, are inclined to content themselves with leaving it to the ministrations and mercy of the proverbial grandmother, the sympathetic neighbor, or, most dangerous of all, the experienced friend who has raised many children of her own. As a rule the baby is much better off under the management of a hopeless old maid than under the care of a woman who has gained her knowledge by the bearing of ten or twelve children. This class of women will either admit they are wholly incompetent or else by virtue of their efforts toward the perpetuation of the species, set themselves far ahead of the doctor when it comes to an understanding of the new-born child. Even trained nurses in many instances display a woeful lack of training in this line; they either do too little and displease the family or do too much and displease the doctor. Of course a competent nurse in these cases is indeed a jewel, but unfortunately the majority of women have to forego this advantage, and this paper is intended primarily for the doctor who not only has to instruct his own nurse but who has to see that his instructions are properly carried out. It is the plan of nature, eliminating congenital defects and accidents during birth, for the child to get along without any unusual care, and overcare and overtreatment may work as much harm as a little neglect. At any rate, any doctor who has watched the different methods of procedure that various home nurses carry out in regard to bathing, clothing, etc., will agree that a few words along this line may not be superfluous.

The management of the infant during the first ten days or two weeks of life is so simple that any mother can understand why certain things should or should not be done, and if the doctor is called upon to look at the baby who has been upset by teas and soothing syrups he usually has himself to blame. It has been my experience, with one exception, never to have seen a mother but who was willing to do everything she could for her baby.

*Read before the Muldraugh Hill Medical Society

and the mother who will carry out the carefully given instructions of the doctor and not listen to the advice of friends, while it makes his responsibility greater, will enable him to give a baby, normal at birth, a good healthy start in life even though it be deprived of mother's milk and in poverty-stricken surroundings.

It is not the purpose of this paper to discuss the care of the mother during pregnancy, but it should be the duty of the doctor to see that the room is sufficiently warm just before the birth of the child. The baby comes out of a temperature of 100 degrees or higher and when the room is sufficiently warm for its entry it is often too warm for the numerous attendants that are sometimes on hand. Labor progresses more vigorously when the room is well heated, and the doctor, after he cares for the baby's eyes, examines the perineum and notes the condition of the mother will not have so many blue babies to look at or feel so many cold extremities. After the baby is breathing properly and the cord cut, the next duty toward the infant is the dressing of the cord. No matter what method of dressing is used every doctor should look after this himself. Sepsis in the new-born is not unusual and the entry of infection is nearly always at the seat of the cord. One of the most aggravating things to contend with, after being busy with the mother for some reason, is to find that your incompetent assistants have not only washed and dressed the baby but cared for the cord as well.

The first thing a baby needs after breathing is established is having its eyes washed out. The vigorous campaigns of the various State Boards of Health toward the prevention of ophthalmia neonatorum have awakened such an interest that even the layman would notice this breach of duty on the part of a doctor. As a rule clear water is about as efficient as a boric acid wash. The preparation to use is a 2 per cent. solution of nitrate of silver to be followed by normal salt solution, or some of the newer silver salts may be used. Most pharmaceutical houses now put up these salts in tablet form, by means of which a solution can be made at the bedside and a fresh non-irritating reliable remedy can be had.

After the baby is handed over to the attendant, she will take it to where a light will shine squarely in its eyes to see how to wash it. The doctor should impress on the nurse the harm that might come from this, not only for the baby's sake but for the sake of other babies she might attend. The child's muscles, bone, nervous system and nearly all other organs grow stronger as the child gets older, but when the first ray of light hits the new-born baby's eyes they begin to grow old. It is not

impossible to cause the baby a great deal of discomfort or even permanent injury to the eyes by carelessness in this simple detail.

Until the milk secretion is established the baby should be put to the breast every four to six hours. This, as a rule, is distasteful to mothers as it brings on troublesome after-pains, but when told that the contractions not only help to clean the womb of retained blood clots and debris, but the baby will get a substance that will act as a laxative and prepare its stomach and bowels for milk when it does come, they will always heed the instructions.

If there is any delay in the formation of milk the doctors orders are likely to be broken more than once. The baby will cry, probably from thirst and hunger, usually thirst, and sugar for the hunger and catnip tea for colic will be the order of the day. A little warm water will nearly always quiet the cry, but sometimes the baby really does have colic, probably due to the action ofcolostrum, and the child must have some relief. If warm water fail one should not hesitate to give a little codeine, as any bad effect it might have is not as harmful as the persistent and painful colic the baby would have to endure. A very frequent cause of crying during the first forty-eight hours of life is the passing of uric acid crystals that have collected in the baby's kidneys during intrauterine existence. It will be noticed that the kidneys will be slow in acting, urination will be accompanied by violent crying and even hematuria. Under these conditions large quantities of water and drop doses of sweet spirits of niter will give quick relief than codeine.

No abdominal condition is supposed to exist if the baby loses weight the first two or three days after birth, or until the milk begins to form. Most of this loss of weight is caused by the loss of fluids, and it is always a good plan to supply the baby with all the fluid it will take in the form, of course, of warm water. If this is done not only will very little loss of weight be observed, but the baby will remain contented and vigorous and take the breast with keen enjoyment.

The nurse should be told that under no circumstances should the baby be given any form of diluted milk during the first seventy-two hours, unless it obtains mother's milk before that time. If she is intelligent she should be told that nature has a reason for delaying the formation of mother's milk two or three days. The bile flow is rarely established before the first forty-eight hours. Bile, while not a digestive, is essential in the saponification of fats. If the fat element of milk reaches the bowel before there is any bile to assist in its absorption, trouble is likely to follow. Most of the cases of so-called three month's colic,

six month's colic, etc., in breast fed infants can be traced to those babies who have breast milk waiting for them at birth or a few hours after birth. There being no bile to act upon the fat, the digestive function of the bowel at this early time is so overtaxed and irritated that it is often days and weeks in recovering.

If, after the third day, milk has not formed in sufficient amount something has to be done. I now come to a subject that has been over-written and overdiscussed for the last 400 years. Many years before the birth of Christ Romulus and Remus subsisted on ass's milk. during the 16th century the wet nurse had her greatest day, then came cow's milk and infant foods. Fortunately, in the last few years the cow has come in for less of the pediatricist's attention and the mother for more. It is being realized that a calf's stomach is made to digest hay and grain and fodder and cow's milk and a baby's is not. Yet, there are still doctors who say they do not consider themselves so unfortunate when the baby is deprived of mother's milk as proper attention to artificial feeding will tide them over all right. There are some babies who seem to thrive on almost anything for that matter, else the mortality rate especially in cities would be a good deal higher, for even with milk depots many city babies drink milk over twenty-four hours old. It is a waste of time to contend that there is a good substitute for mother's milk, or that cow's milk can be made nearly like mother's milk, and it is the doctor's duty to see that the baby is put to the mother's breast and that it remain there if she is physically competent to nurse it. I have never yet seen a mother but who could be induced to nurse her baby. But any time she is likely to imagine some emotion or experience she has passed through has made the milk unfit for the baby, or that she is not giving sufficient milk, and sometimes she will wean the baby and the doctor will not know of it until he is called upon to treat some resulting disturbance of digestion.

As a matter of fact, the emotions, unless they are long continued, have very little effect on the quality of milk, and for any disturbance she may note she might look back to a dinner of sweet potatoes, a supper of welsh-rabbit, or maybe beer which someone—not the doctor, I hope—has recommended as a galactagogue. It should be remembered that constipation in the mother is one of the most prolific causes of colic in the newly born. The amines which result from putrefactive changes are slowly liberated in the bowel, gradually absorbed and excreted in the milk, and this factor should be given due consideration before deciding mother's milk does not agree with the baby.

There is no question but that if mothers will cooperate with the doctor very few babies will have to be artificially fed. After telling her of the advantages that are likely to accrue to herself from nursing her infant, she should be told that no matter what the surroundings and treatment, a two-weeks-old baby is not able to stand an attack of measles, diphtheria, scarlet fever or whooping cough like a child two years old. She should be told that nature wisely provides for these conditions if we let things work out as she intended. She should be told of the many undiscovered chemical substances in mother's milk—of the agglutinins, the antitoxins, the alexins, the ferments that confer immunity from disease on the nursing as no other milk or medicine does. Of course she will have a counter-argument in the form of well-developed healthy children, maybe her own, who have been raised artificially, and her trump card will be that Dr. Somebody put the child on cow's milk or malted milk or whatever the food might be. There is no question but that some of the finest specimens of babyhood are artificially fed, but the doctor who tells a normal mother that it is not a calamity if she does not nurse her baby is to be classed with those women who tell her that doctors do not know everything because they ate green beans and fried corn the day after their baby was born and cleaned house three or four days after confinement without any disadvantages to themselves.

The estimate of Dr. Jacobi, who states that 100 per cent. of mothers can nurse their children seems rather high, but there is no doubt but that conscientious efforts to cause unpromising breasts to produce sufficient milk for nourishment will be rewarded. The baby will then get the food that nature intends to be developed into the organs of digestion; then when these organs are started right it can take on other food for the rebuilding of the adult body. The unknown substances in mother's milk cannot be supplied in any other food, and even granted we could mix a formula with the exact chemical constituents of mother's milk—practically an impossibility—the effect could not be the same and the mixture might be altogether unpractical. The very fact that every authority after which we read has his own formula or hobby for infant feeding shows there is no standard by which to go. When we feed a baby artificially the first formula is purely guess-work, an experiment, and unless the doctor is prepared to assume the most watchful care, armed with a thorough knowledge of the physiology of infant digestion, and blessed with a most intelligent mother or nurse, his second step in the process is likely to be disastrous.

The feeding schedules and formulas found in various text-books and accompanying the literature of proprietary infant foods are simply snares to make your little patient sick and the doctor who depends solely on them with any confidence in their success has nothing on the quack who makes a diagnosis and treats your case from the blank you fill out and send him through the mail. Thus in this formative period, it behooves the doctor to do all in his power to give the baby mother's milk, not only for the benefit of the infant but for the worry, time and work it will save himself.

What is just as essential for the infant as food is air, not merely that air that goes to form a well-developed physique which many country babies as well as tenement babies are denied, but the doctor should see that the child is breathing properly as soon as it is born. Asphyxia takes toll of a good many more infants than statistics show, and in feeble, nervous babies, social and hygienic conditions being satisfactory, a history of more or less trouble in starting regular breathing will be obtained.

After the baby begins to nurse the need of plenty of fresh air is still more important. The average baby will take enough food in twenty-four hours to produce heat enough to bring water to the boiling point or higher. There must be some way to cool this body off and the only way to do it is to allow plenty of fresh air—air that circulates. The baby who, after nursing, is laid in a crib surrounded by delicate drapery through which no draft of air can penetrate is very little better off than the tenement child whose fresh air is substituted by the hot breezes from the roofs and streets about it. If the prosperous baby is bottle fed it is almost as liable to diarrheal diseases as its tenement brother, for there is no milk that does not contain germs and the warmer the body gets and the less chance it has to cool off, the richer will be the field for bacteria to get in their deadly work. Of course the baby should not be exposed, but there is no doubt but that the majority of babies are not only too warmly clad but the temperature of most rooms are kept overheated to the point of unhealthfulness both for the mother and child.

It is important for the welfare of the child that it should sleep as long as possible, and there are two things necessary before this physiological process will take place. They are suitable food and fresh air. A baby will sleep longer in a well-ventilated room than in a closed one just as it will sleep longer out of doors than in the house. When the baby awakes have the nurse give it a little water, and when it is thoroughly awake give it food

if it cries from hunger. Try to impress on the mother the harm of putting the baby to the breast every time it gets fretful. Even if it is annoying to the company; let the baby cry a little, it will do him good. Besides, too frequent nursing not only overworks the digestive function of the infant's stomach, but it draws from the mother's breast a highly concentrated secretion that is not only hard for the baby to digest but the drain on the nervous system will rapidly make her an irritable nervous old woman. Opinions vary as to the frequency of nursing, but the newly born should not be put to the breast oftener than every two hours, and unless bothered with a troublesome regurgitation always let the baby nurse all it will take. It should be remembered the longer the interval between the nursing, the better it is for the mother, and for the benefit of the child it is a very important thing to preserve the mother's nervous system and general health.

Another thing that must not be neglected is to try mixed feeding if the mother does not secrete sufficient milk. Medical men are too prone to take the child away from the breast entirely, if after a few days it is not getting enough milk. Give the mother a chance and the results will surprise you. Among tenement babies and the poor about 90 per cent. get breast milk; among the well-to-do about 17 per cent. It is not impossible to see what your prosperous patient is capable of if you give her a little of your time and encouragement.

If, for any reason, it is impossible to put the new born baby to the breast, it becomes necessary to supply a substitute, and the best substitute is cow's milk provided it agrees with the baby *from the start*. Just what formula to begin with depends upon the general condition and vitality of the baby. The varying changes in cow's milk itself makes any set rule or formula an impossibility at this early period. The doctor must differentiate between the science and the art of infant feeding; then when he is satisfied with his proportions of fat, sugar and protein, if the baby does not thrive, try another cow, or what is better, a herd. If this does not agree it is almost a waste of time to keep juggling formulas; don't wait until the child gets marasmic and inanition fever sets in. About the best substitute after cow's milk fails is condensed milk. Many times this will fail but if the baby can take it there is absolutely no objection to its use. Practically all pediatricists and many doctors are severe in their condemnation of condensed milk, but most of them will admit they have had no experience in its use. The pediatricist usually sees the baby after it has been unsuc-

cessfully fed for weeks or months on condensed milk, and knowing the impossibility of the formula immediately concludes it cannot be good. The great trouble is when the baby does get started on condensed milk it is usually neglected by the doctor; it is pleasant to hear the mother say after trying days and nights "The baby is doing fine and getting fat every day." I do not want it understood that I advocate the use of condensed milk in preference to cow's milk, but if the doctor would take as much pains with his condensed milk formulas as he does with cow's milk he would see condensed milk does not deserve the reputation it has.

After the baby has used condensed milk two or three months, try cow's milk again; if it does not then agree, put it back on condensed milk. Babies who are raised exclusively on condensed milk usually develop into great meat eaters which supplies sufficient protein before any lasting damage is done. Young practitioners should remember that, in spite of their teaching, a live, fat condensed milk baby is better than a dead one; it is better than a poorly nourished, colicky, undeveloped cow's milk baby, and will grow into just as healthy an adult body, which is, as has been mentioned, the ultimate aim of the physician in the management of children.

Here it may be well to mention that the ill success that often attends the inexperienced in artificial infant feeding is not that his formulas are wrong, but that too great a quantity is allowed at a single feeding. An infant's stomach at the end of the second month rarely holds over three ounces, yet it is not unusual to see a child at this age take four or five ounces of food at each feeding. One of the most dangerous formulas extant is the one on a well known almost universally used brand of condensed milk. The strength of the mixtures recommended express the maximum quantity to be used, and physicians who follow these formulas without regard to the child's individual characteristics, are not only likely to have a sick baby on their hands, but almost invariably express their disappointment and failure in the use of condensed milk.

It might be well to mention here that it is absolutely essential to have fresh condensed milk if one is to be successful in its use. The product as it comes off the shelves of the grocery stores, and even from wholesale houses, is wholly unreliable. It is next to impossible to describe to the nurse how good condensed milk ought to look. If it is yellow, and thick, and crystallized it is no good and will surely make the baby sick. The best plan is for the doctor to inspect every can till he is sure the baby will take it readily, then have the grocer or druggist to order a fresh case direct. Un-

der no circumstances tell the nurse to get a can of milk and mix it according to directions without first assuring yourself that the milk is good.

No mention has been made of various proprietary infant foods in beginning infant feeding, but even here they may be used to an advantage if properly administered. The practitioner should acquaint himself with the formulas of these foods and if the elements they stand for are indicated, there is no objection to their use. For example, if a baby has an intolerance to cane or milk sugar it can often be fed malt sugar with success, and Mellin's Food is a clean, easy and convenient way to administer malt sugar. If a doctor wishes to use starch he has an excellent, though rather expensive, article in Eskay's Food. The doctor should banish from his mind the extravagant advertising put out by many of these manufacturers. If he uses their products "when all else fails" they also will fail. But if he wants to test or use some food element indicated by a particular food he should not hesitate to use it as most of these foods are put up with the greatest care and are of the highest purity and cleanliness.

The points herewith set forth as to the relation of the doctor to the infant are so simple, so elementary and so fundamental that one hesitates to read them before a body of medical men. Still, many of us, so long as the baby does not cry and the parents do not complain, are content to give it merely a secondary consideration. Even the most conscientious and thorough of doctors have long ago realized that in view of the vast amount of ignorance that confronts the majority of babies upon their entry into the world the largest part of their sincerest efforts often go for naught. The great number of children that die yearly from preventable diseases is indeed appalling, but the doctor should not consider this such an indictment against his profession after all. Age-old, prostitution and ignorance, reinforced by the modern factory with its army of tired women—many of them mothers—often map out the destiny of the child as soon as it is conceived. The physician's little patient may be a resident of the most palatial of homes, or he may attend the case *sans* pay, *sans* thanks, *sans* gratitude, and in spite of his efforts he sees the little white coffin carried to the grave, a silent witness against the sins of the father, the dead fruit of exhausted motherhood. These things are out of the doctor's hands, he can no more breathe the breath of vitality into a baby than he can breathe the breath of life; he simply has to do the best he can.

But the army of little fellows that come kicking and squalling into the world—this is

a plea that they receive their full share of the doctor's attention. The muck-raking magazines that tell the patient that her doctor is not only a back number and incompetent, but that his ignorance is little short of criminal negligence if he does not save her from the perils and travail of child-birth through the merciful ministration of scopolamin-morphine, cannot be depended upon to take this duty off the doctor's hands. While all mothers should be encouraged to read good articles on child welfare, they should be told that most writers of these popular magazine articles have had neither medical training nor experience and to attempt to carry out their teachings literally, by overcare and overtreatment, might be conducive to more harm than good. Among the ignorant and the poor there is all the more need of the doctor's care and attention toward these little ones. The result of his efforts in their behalf will certainly be sufficient reward for his pains.

LOCAL ANESTHESIA.*

By GUY ARP, Louisville.

The object of this paper is not to advance a new theory, but to point out some of the advantages and uses of local anesthesia for the purpose of stimulating a more general interest, especially among those who are called upon to perform various surgical procedures without the assistance of a trained anesthetist, and in conditions not permitting the general anesthesia.

Efforts to control pain date back to earliest antiquity; and at first, were based almost wholly upon superstition. As knowledge and experience increased, such physical anesthetics as cold, pressure, light, and later electricity, were used with varying degrees of success. Cold was first applied as snow or ice, and later the temperature was brought much lower by the addition of salt. These methods fell into disuse and were revived when ether and ethyl chloride were discovered. Ethyl chloride and similar volatile substances, depending upon rapid evaporation for the lowering of temperature, still have a limited field of usefulness. Freezing temporarily paralyzes the terminal sensory nerves; and if prolonged, may cause gangrene. After thawing, the tissues are hyperesthetic and remain painful for some time. The anesthesia is incomplete, and is at best an emergency make-shift. Such other physical anesthetics as light, pressure, etc., have long since been discarded as impracticable.

Local anesthesia by chemical agents, according to Connell, is produced by reaching the sensory nerve terminals; first by osmosis through the mucous membrane and other ab-

sorbent surfaces; second by hypodermic injection into and diffusion through the lymph spaces—infiltration anesthesia; third by local injection into the sequestered venous system of a given area—intravenous anesthesia; and fourth by injecting the anesthetic into the arterial system supplying the desired areas—endarterial anesthesia. Also by intramural and perineural injections. He dismisses cataphoresis with a word.

Natives of the mountainous districts of Peru and Bolivia had for many years known of the stimulating effect of chewing the dried leaves of *Erythroxylon coca*; but to Gordeka is given the credit of isolating the alkaloid in 1855, which made possible modern local anesthesia. Lennander says it was not until 1884, when Koller demonstrated the anesthetic effect of cocaine upon the conjunctiva, that local anesthesia was born. Einhorn's discovery led to its synthetic production and opened the field for scientific experimentation.

According to Allen the ideal local anesthetic should possess the following qualities:

(1) That it should be efficient in producing a durable diffusible and maximum analgesic effect with a minimum of local tissue disturbance.

(2) That it be non-toxic to the organism when absorbed in the doses required to obtain the fullest local effect.

(3) It must be benign in its local action on the tissues, non-irritating, non-toxic; it should not permanently injure the cellular protoplasm or interfere with the normal repair of the traumatized tissues.

(4) It should be absolutely sterilizable by heat.

(5) It should be soluble.

(6) It should be thoroughly compatible with adrenalin.

(7) It should be commercially accessible and available at a reasonable cost.

Cocaine is the original type for local anesthetics and is the most rapid and effective of the group but unfortunately is dangerous; owing to its toxic effect upon the central nervous system.

It might not be amiss to state briefly some of the properties possessed by cocaine, in as much as it is typical of the class under which nearly all the agents used are grouped. Its description holds for them also, but in a much milder degree. The salt occurs in the form of a white crystalline powder; readily soluble in water and in alcohol. It does not stand boiling well. It is a poison to both animal and vegetable protoplasm. Alkalies may cause precipitation; therefore, it should be kept from instruments boiled in strong soda solution. When taken in toxic doses cocaine acts first as an excitant, (this may pass quick-

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ly and unobserved) which may be followed by paralysis of respiration, etc., due to its action upon the central nervous system. Ideas may flow more rapidly but judgment is not improved. In event such toxic symptoms should arise following the use of cocain, or any cocaine-like preparation, Allen in his work on local anesthesia, suggest in part the following treatment: "Such mild symptoms as loquacity or faintness are usually controlled by having the patient maintain the horizontal position or by lowering the head of the table; this position should be continued for one-half hour or longer following the disappearance of symptoms. If syncope occurs or the heart becomes weakened digitalis should be used, preferably by hypodermic; while ammonia or amyl-nitrite is given by inhalation. When convulsions and unconsciousness supervene ether should be given by the open drop-method to the degree of mild surgical narcosis. It is particularly valuable because of its stimulating effect upon the heart and respiratory system." The total amount of cocaine absorbed should not exceed 3-4 of a grain. The U. S. Pharmacopoeia gives it at 1-2 grain while Lennander says the dose can never be fixed, owing to the idiosyncrasy some people possess for the drug. The soluble salts of cocaine are absorbed rapidly from the mucous surfaces, and from denuded areas; hence, should be safeguarded by an adjuvant. Czerney had a death from the injection of 7 c.c. of a 1 per cent. cocaine solution into the urethra. Cocaine is probably at present most used in nose and throat operations for topical application; (10 to 20 per cent.) because it is more readily absorbed than novocain, and produces deeper and quicker anesthesia. Nevertheless, many workers in this field have abandoned it, believing their results following the use of novocain-adrenalin solutions to be equally as good and without risk.

From the above description of cocaine it is readily seen, that while it possesses some qualities not found in the later synthetic preparations, it is too dangerous for general use.

Of the many substitutes for cocaine which have been brought forward (novocain, stovain, tropococain, eucain, alypin, quinine and urea and many others) during the past few years, none so nearly fulfill all the requirements of Allen as novocain; which, while not ideal is considered the best at present, and has been almost universally adopted. Its greatest advantages is its low toxicity. Being only one-seventh as toxic as cocaine it may be used in the same dilution in quantities from seven to ten times as large. Seven grains has been stated as the maximum amount of novocain that can be absorbed with safety; although

cases have been reported in which five or six times this amount was used with no ill effect. Novocain increases the heart action and raises the blood pressure by causing contraction of the non-striped muscle fibers in the arteries and capillaries. Its action is fleeting when used alone; hence, should always be employed with an adjuvant. In dilutions of 0.25 to 0.5 per cent in 0.6 per cent. salt solution novocain may be employed in quantities of 8 to 10 ounces; and more with safety. Bevan in a recent article states that he could find no report of a fatality from novocain when used in the above dilutions.

All solutions used in local anesthesia should be isotonic; in other words, should neither take from, nor give anything up to, the blood stream. Such solutions enhance and prolong the anesthetic effect. Although novocain keeps well in solution it is better to prepare fresh mixtures for each operation. This insures a sterile and more dependable solution.

Previous to the discovery of adrenalin by Takamine and Aldrich in 1901, the adjuvants most commonly employed were constrictors placed proximal to the field of operation, or gelatin added to the anesthetic solution. The remarkable properties of adrenalin as a vaso-constrictor soon led to its adoption by the various specialists and has since become almost indispensable both to the surgeon and the therapist. Bevan warns against the use of the tablets containing adrenalin and novocain found on the market, as he has observed necrosis following their use, and believes they should be generally discarded. He says adrenalin should be employed in dilutions of not more than 1 to 100,000 or 1 drop of the 1,000 adrenalin solution to each 100 drops of novocain solution used. This would be 20 drops to each 8 ounces, which might be regarded as the maximum amount to employ with safety. Adrenalin in this amount is sufficient to safeguard the novocain and to produce a comparatively dry operative field. Connell believes that it should not be applied to the mucous membranes stronger than 1 to 2,000 or injected subcutaneously stronger than 1 to 10,000 and should never be used in intravascular anesthesia. Adrenalin increases the action of the anesthetic agent by holding it in situ; preventing its rapid absorption. It is decomposed by light and prolonged boiling.

Much confusion was caused early in the use of local anesthesia by the large number of solutions employed. Many thought it necessary to use a different strength solution for each tissue injected. Fortunately the technique has been so simplified that now one rarely employs but a single strength solution, (usually less than 1 per cent.) for all operative work. This has the advantage of allowing the

operator to become familiar with the use of a certain strength solution, and to know better what to expect of it. It is also less expensive, and reduces the possibility of error to a minimum. I have had the opportunity of observing closely the effect of local anesthesia in several hundred cases which include a large variety of operations. Only one solution was used; consisting of 1-2 per cent. solution of novocain in half-strength normal salt solution. This was boiled for three or four minutes and from three to five drops of 1 to 1,000 adrenalin solution were added for each ounce of anesthetic solution used. Its anesthetic effect was always sufficient and in many instances perfect analgesia could probably have been obtained with a much weaker solution.

Intraneural, intravascular, intraspinal and other methods of producing regional anesthesia will not be discussed more than to say that they are still used in special cases; particularly intraspinal anesthesia, which is occasionally of the greatest value in prostatectomies, etc. They are much more difficult to administer than infiltration anesthesia; are impossible to control after being injected, and frequently very dangerous.

Local infiltration anesthesia was introduced by Schleich (1891-3) when he demonstrated that weak solutions of cocain when injected "under pressure" produced complete anesthesia. Schleich in his work used different strength solutions containing morphin sulphate, salt and cocain in distilled water, with good results. The success of infiltration anesthesia depends upon thorough edematization of the field of operation, and because of its simplicity and good analgesic effect, has practically supplanted all other methods.

Little equipment is required for proper infiltration which is a great advantage in emergency, office and dispensary work, and in the absence of trained assistance. Two syringes are needed; one a 10 c.c. and the other a 1 or 2 c.c., syringe, with an assortment of needles ranging from .5x25 m.m. for injecting the skin and inflammatory areas, to a .7x60 m.m. needle, which will be plenty large for ordinary deep infiltration. I much prefer the Record type of syringe for infiltrating, because they are strong, accurately constructed, easily cleaned and may be quickly detached from the needle for refilling. The Luer syringe is somewhat similar, and has the advantage of being cheaper, but I have not found it as convenient.

Very little need be said of the method of infiltrating as most everyone is familiar with the technic. In the skin, which is easily anesthetized as the agent may be applied directly to the nerve terminals, the injection should

be intradermal producing a series of whitish wheals which are made to extend along the entire line of incision. As many wheals as possible should be made before withdrawing the needle and when it is necessary to do so, it should be reinserted within an anesthetized zone. In this way the patient feels only the first thrust of the needle, which in extremely nervous or debilitated persons may be relieved by freezing slightly with ethyl-chloride, or by pinching up the skin. This is rarely necessary. It is a good plan to infiltrate the tissues for some distance about the field of operation in order to completely "isolate" the operative area; preventing any possibility of pain sensation reaching the central nervous system.

In making deep subcutaneous injections the needle should be slowly advanced at the same time injecting the anesthetic solution, which destroys the pain sensations almost as quickly as the tissues are penetrated; and in addition tends to push away the larger vessels preventing their injury and the possibility of the solution being injected directly into the blood streams.

When infiltrating for the removal of tumors, and for anesthetizing inflammatory areas, it is necessary to establish a zone of infiltration which "blocks" the operative field from every side. Perfect anesthesia may be gotten in this way without disturbing the tumor or the inflamed tissues, which is important when malignancy is suspected.

The best results are obtained not by massive infiltration of the tissues; which might be responsible for some of the after pain, but by complete diffusion of the anesthetic through the tissues. Gentle massage is beneficial, but as a rule all that is required for diffusion of the anesthetic is a little time.

The choice between local and general anesthesia should be left to the patient, providing there is no serious contraindication to inhalation anesthesia. Many claim the advantage of local anesthesia to be in favor of the patient. True, local anesthesia demands a greater knowledge of anatomy, cleaner dissections, complete hemostasis and the proper regard for tissue, yet there seems to be no reason why these conditions should not obtain regardless of the anesthetic agent used.

Local anesthesia has many advantages. It enables the unassisted surgeon successfully to practice all kinds of minor surgery. It does away with the necessity of long fasting before operation; the thirst, nausea, and much of the gas that frequently follows. It is indicated in the aged, in cases with advanced cardiac, renal and pulmonary disease, in arteriosclerosis, in the cachectic, and in shock.

Before the advent of local anesthesia many benign tumors and ulcers which are now be-

ing removed early were allowed to undergo malignant change because the patient would not submit to general anesthesia to be relieved of what was apparently an innocent growth.

Lennander has shown that pain sensation is confined nearly entirely to the parietal peritoneum; and with better knowledge of anesthetizing the peritoneum, this field has broadened until now almost any operation within the abdomen that does not require traction upon the viscera, may be carried out with little pain. Local anesthesia is particularly useful in exploratory operations for malignancy, and frequently in secondary operations. Because of the usual low vitality of this class of patients general anesthesia is often not indicated; and when necessary gastrojejunostomy, gastrostomy, etc., can be performed successfully.

I mention the following merely as examples of what can be done under local anesthesia. Ruge has performed vaginal hysterectomies, and Smith reports successful Cesarean sections without pain. Hartel has several times removed the superior maxilla; also the tongue, by injecting the Gasserian ganglion with 1 c.c. of a 2 per cent. solution of novocain and adrenalin. Crile in 1899 was the first to do an amputation of the thigh under regional anesthesia.

One of its greatest fields of usefulness is in combination with general anesthesia. The combined method serves a double role; first it reduces the amount of toxic substance used; and second it enables the operation to be performed with a minimum of shock. According to Crile's theory of anoci-association the general anesthetic prevents the psychic reflexes from reaching the cortex, while the local anesthetic blocks the traumatic reflexes, preventing their reaching the higher centers. Combined anesthesia is of value in operations upon children and upon persons with an unstable nervous system, as so frequently occurs in thyroid intoxication in which the psychic reflexes play such an important part; also, in cases in which a minimum of general anesthesia is demanded; as, in pulmonary tuberculosis or advanced kidney diseases. Exophthalmic goiter cases as a rule do not tolerate general anesthesia well and by adapting the combined method only enough ether is necessary to prevent cerebral excitation. It is advisable to give such cases 1-6 grain of morphin one-half hour or so before operation; and if very nervous, they may be given in addition to this 1-200 grain of scopolamin.

Following are given briefly the views of a few of the more prominent workers in this field. Mitchell believes hernias of all varieties are best done under local anesthesia, and that age is no contraindication. Bloodgood

in a recent article says: "I wish to emphasize here again that local anesthesia has its distinct place in operative technic, and it is a question whether it should not be employed in every operation, if possible." He also states that Bier, of Berlin, recently expressed an opinion that nearly all urological operations can be carried out painlessly under local anesthesia. Balfour believes the possibilities of local anesthesia outside the abdomen are almost without limit. Bean says that in local anesthesia with novocain and adrenalin, we have a very safe and satisfactory method which should be employed in a large group of cases. He is using it in 30 per cent of his cases.

McGrath states that with the scientific advancement of local anesthesia we may hope to see the number of indications for general anesthesia reduced to a minimum. Allen quotes Crile as saying that 90 per cent. of his cases operated by the anoci principle have no unpleasant recollection of the day of their operation.

If I am permitted to draw conclusions from such an article, I should like to add the following:

The anoci-association principle, as used and advocated by Crile, is unquestionably a great step forward in the relief of many of the unpleasant symptoms that frequently follow operations; (as, pain, shock, thirst, nausea, gas, etc.), and though we may not accept the fully developed theory, I believe it has been proven of sufficient value to merit a more general usage.

Novocain-adrenalin solutions, when administered by the infiltration method of Schleier, are thoroughly efficient as a local anesthetic agent; are practically without mortality when employed in 0.5 per cent solutions or less, are easily and quickly injected, and should be used in preference to other agents and methods, whenever possible.

Success or failure in local anesthesia depends, to a large extent upon the ability of the operator to obtain the confidence and cooperation of his patient.

Local anesthesia is rapidly assuming a definite and permanent place in all minor and major operative surgical procedures. It possesses many advantages which should commend its use; first to those who are obliged to operate without the assistance of a trained anesthetist; second in any condition not permitting of inhalation anesthesia (bronchitis, nephritis, etc.), third in combination with general anesthesia, when only sufficient general anesthetic is required to prevent the psychic reflexes (as, in children, goiters, etc.); fourth in emergency, office and dispensary work; and in the absence of sufficient trained assistance. In dispensary work it frequently

permits the patient to obtain surgical relief and return to work in the shortest possible time; preventing the necessity of entering the hospital to await operation. In this way local anesthesia proves a saving both to the public and the individual.

VACCINES AND SERUMS.*

By CHAS. F. CLAYTON, Balkan.

This paper, written from the general practitioner's standpoint, is only intended to touch upon the practical side of serum and vaccine therapy.

Bacterial vaccines were first introduced by Sir Almroth E. Wright, of London, and since then have taken an eminent place in the armamentarium of physicians.

Let us digress a little and understand the difference between vaccines and serums.

A serum is obtained from the blood of a highly immunized animal for example the animal is repeatedly inoculated with increasing doses of a certain germ. To overcome these inoculations the animal builds up immunizing resistance to these organisms. The horse is usually employed. After this is carried on to an adequate degree of intensity some of the animal's blood is withdrawn, the corpuscles are separated from the blood serum, and this blood serum is then used for therapeutic purposes in infections.

Here the animal produces the antibody, it is intimately tied up in the blood serum, and the therapeutic virtues consist of giving the patient the antibody that has been prepared by the animal to aid in overcoming the infection.

On the other hand bacterial vaccines are prepared by growing the germs on artificial culture media. Then making a suspension of them in normal salt solution after killing them.

An approximate number of these germs is then injected under the skin.

It will be noticed that there is no animal nor blood serum employed in this instance. No antibody is given the patient.

The purpose of injecting the killed germs is to stimulate the body cells so antibodies will be more rapidly produced and in that way overcome the infection.

With the serum treatment a passive immunity is established while vaccines produce an active immunity. Where this inherent difference between the two methods of treatment is not understood much confusion naturally follows.

Phylacogens are the metabolic products of bacteria separated from the bacterial cells by porcelain filtration—this bacteria free fil-

trate containing suitable preservatives constitutes the phylacogens. They are administered in large toxic doses as shown by the severe reactions following their administration.

The toxic materials they contain penetrate every part of the body soon after administration, which causes a toxic shock.

Vaccine and serum therapy depend upon a correct diagnosis, the selection of a vaccine or serum and the administration of the same. Polyvalent stock vaccines are usually employed by most of the physicians as they have found them efficient and always ready.

As country physicians being remote from laboratory facilities or medical centers, valuable time may be lost in having an autogenous vaccine prepared for in acute infections the loss of time required to make an autogenous vaccine is often irreparable.

Infants and children are quite tolerant to vaccine therapy, the dosage being from one quarter to one-half the adult dose.

Bacterial vaccines may be used to advantage in conjunction with any other therapeutic measure, they are harmless when ordinary precautions are observed.

In the early stages of acute infections injections should be made at from one to three day intervals, while in subacute and chronic cases five to ten day intervals is usually sufficient, this of course is only approximate. In most instances bacterial vaccines may be administered on clinical symptoms.

It is better to give your vaccine at once and verify your diagnosis by microscopical examination afterward in these acute conditions.

We may have some patients who do not seem to improve on stock vaccines; in these cases it is advisable to make a bacterial examination and have an autogenous vaccine prepared from this unusual organism.

I might mention for the first serum the diphtheria antitoxin the initial dose being from five to seven thousand units and repeated in six hours if disease is not checked nor the membrane begins to shrivel. In very severe cases you may use as high as 10,000 units as the initial dose repeated as needed.

Tetanus antitoxin when used as prophylactic is given subcutaneously 1500 units. If symptoms of tetanus are present it should be given intravenously 20,000 units repeated every day as needed.

Antistreptococcal serum—used in erysipelas, puerperal fever and other streptococcal infections—may be given in doses of 50 to 150 c.c. with splendid results.

The typhoid vaccine has demonstrated its usefulness in the armies of the world, as shown by the statistics of 90 per cent. reduction in the death rate of the American army, 75 per cent. in the British army, and 93 per

*Read before the Harlan County Medical Society.

cent. in the Japanese army, and equally as high a per centage in other communities where it is used extensively.

The acne bacterines—the mixed is usually employed—I think I have gotten some good results with this preparation. I use soamin in conjunction with it, also local applications.

Gonorrheal vaccines—the mixed, is usually employed here also, this vaccine is most useful in epididymitis, prostatitis, gonorrhoeal rheumatism and in some few cases of chronic gonorrhoea. I have used it in all of these conditions, but the most striking results were obtained in the gonorrheal rheumatism.

Pertussis vaccine. I have used both the Bordet and the mixed in about fifteen cases. In three the results were very gratifying, but in the remaining twelve little if any results were observed. I was not enthusiastic enough, however, to continue using it. Sidney J. Myers, in the *New York Medical Journal* says, "In a recent epidemic there was almost freedom from the usual nervous phenomena and in no cases were there any complications.

The vaccine used contained 50 million pertussis organisms, twenty million each of the staphylococcus aureus, micrococcus catarrhalis, and the bacillus influenza and ten million streptococcus pyogenes in each c.c., his initial dose being one-half c.c. and a total of three to four doses was sufficient. Under this treatment the usual duration of the ease was 25 days."

Antimeningitis serum which is used in epidemic cerebro-spinal meningitis; the procedure is as follows: The point of injection being the spinal canal after the withdrawal of about 20 c.c. of the spinal fluid and then injecting the serum following, repeated as needed.

Colon vaccine indicated in cystitis, fistula in ano, catarrhal jaundice and other local infections caused by the bacillus coli. This is most often used in post operative work.

The bacillus coli with the staphylococcus aureus, albus, citreus and the streptococcus pyogenes and the pneumococcus constitutes a combined vaccine which is more commonly used than the bacillus coli alone. This combined vaccine or mixed vaccine some doctors have found gives good results in cases of acne where other vaccines have failed. Perhaps this influence is brought about by the marked tonic effect it has on the digestive organs resulting in an adequate appetite with a good digestion.

The usual dose is one c.c. with other therapeutic measures. This vaccine is also used as a prophylactic in general surgery, operations on the bladder or urethra and may be used to advantage after confinements where lacerations exist.

Rheumatic phylacogen has proven its efficiency in the treatment of rheumatism both the acute and chronic conditions, except in acute rheumatic arthritis, where best results are obtained after the fever has subsided. Following is a case report of a patient treated two years ago who has had no recurrence up to the present time.

Case VI. Rheumatic Iritis. Mrs. J. G. A., age 50, married, housewife, American. She gave a history of rheumatism dating back a number of years. Patient's chief complaint was pain over the forehead and temple, and impaired vision and intense redness of the eye, being what she called blood-shot.

Treatment. The salicylates with sal. hepatica, a one per cent. solution of atropin to keep the pupil dilated, and a 20 per cent. solution of argyrol, four or five drops of this used each night. Also hot applications. This treatment was kept up for some time and she finally consented to let me use the phylacogen, giving her 5 c.c. subcutaneously every third day until a total of 40 c.c. were given. The result in this case was very gratifying.

The mixed infection phylacogen the most beneficial results I have ever seen were in asthma. It is also used in chronic bronchitis and acute rhinitis, erysipelas and puerperal fever and have used it in some few cases of pulmonary tuberculosis in conjunction with von Ruck's vaccine. In these cases, however, I was unable to complete the treatment, but they had gained so far as I had given it. In these cases I seldom give more than 2 c.c. I have seen some good results from the mixed infection phylacogen in infected wounds and in cases where antiseptics could not reach the point of infection.

The specific treatment of tuberculosis. Since the introduction of his original tuberculin Koch has himself made some improvements in the product, while other observers have introduced modifications. However, the action depends on the same principles as the original, but are supposed to have some advantages over it. Among there are Deney's Boullion filtrate, Koch's bacillus emulsion, Von Ruck's watery extract and the tubercular vaccine, von Behring's and others. During the past few years the use of these culture products has gradually become more popular until now they are being used in the majority of large institutions for the treatment of tuberculosis and favored by a rapidly increasing per cent. of the physicians who are treating the disease. Von Ruck's new vaccine is diagnostic as well as curative. It is administered hypodermatically, the dosage being for the adult 0.6 to 1. c.c. If positive you get a local reaction at the point of injection, which consists of a redness and swelling diffused

over a larger or smaller area. The part is sore on pressure or may feel lame and tired. The reaction reaches its height in 24 hours, then disappears quite rapidly. Sometimes a general reaction is noticed and with this you have the usual symptoms of fatigue and lassitude to vague and aching pains, which may be in the joints, bone and back with an accompanied rise in temperature, which may reach 103 or 104 degrees. These symptoms usually reach their height as in the local reaction in 24 hours. These symptoms, however, are undesirable and the dose should be diminished. As treatment continues the reaction grows less and eventually disappears. Nearly all of the patients treated with Von Ruck's vaccine improve generally and increase in weight. Of course we cannot expect much from any vaccine in the destructive stage of tuberculosis because it becomes more problematical when you have profound septic symptoms to deal with. But in some cases with absolute rest and the use of mixed infection vaccine in conjunction with Von Ruck's vaccine improvements are noticed.

One must bear in mind the use of culture products does not supplant but is simply an adjunct to the popular open air, diet and rest treatment already so well known and generally used in the treatment of tuberculosis.

Von Ruck's vaccine is more concentrated, and is used one-half former dose.

Typhus Fever in the Russian Army.—Shirokoff found the following measures efficient in the campaign against typhus fever in the Russian army: (1) instruction of soldiers in regard to the role of insects (lice) in transmitting the infection; (2) every possible means to be used to keep the body clean, providing the soldiers with sufficient amounts of underwear, soap, etc.; (3) watching carefully for the presence of epidemic disease among the population where soldiers are stationed; suspicious lodgings should be condemned; (4) in case of an epidemic in the rear of the army, a twelve or fifteen day quarantine is established, the clothing, lodgings and the soldiers are made free of insects.

Skin Tuberculin Test in Surgical Tuberculosis.—Zitronblatt studied v. Pirquet's test on 256 patients: 92 had visible tuberculosis, mostly of surgical character, 27 were merely suspects and 137 were clinically free from tuberculous symptoms. He used Koch's old tuberculin in 25, 10, 5 and 0.5 per cent. solutions. For control vaccination he sometimes used bouillon. He found that the weaker the solution of tuberculin, the weaker was the reaction, the more indefinite were the results. His conclusion therefore is that Pirquet's test has no practical value for the diagnosis of surgical tuberculosis.

SKULL AND BRAIN INJURIES, FROM A SURGICAL POINT OF VIEW.*

By C. E. VIDT, Russell.

The diagnosis and treatment of skull and brain injuries have in the past, and will in the future, tax to the utmost the ability and judgment of every physician and surgeon. When to operate and when not to operate is often a disputed question, for the severity of the injury and the presenting symptoms are often so vague that their interpretation, as to the real pathological condition present, by two or more observers often varies considerably. It is true that we have in the last few years made considerable advance in the diagnosis and treatment of these conditions, and the result of which has been a gradual decrease in the mortality, but still cases frequently occur which baffle the most proficient and the close observing, and the mortality is higher than we like to see it.

From a diagnostic standpoint the symptoms of skull injuries together with the various complications so frequently associated have been very beautifully presented. With a thorough knowledge of all these symptoms and seeing such a case plainly before you, you bubble over with confidence and pride at the ease with which you can diagnose any case of skull and brain injury should one present itself. When the practical test actually appears, however, at times you do not bear fruit, the case is somewhat of a puzzle to you, and the classical text-book symptoms are not sufficiently interpretable to warrant you to make a clean cut diagnosis. To complicate matters furthermore, your consultant does not see, from the symptoms elicited, the existing pathology as it appears to you, or he does not, for some reason, favor the method of treatment as suggested by you.

I think gentlemen, if you can recall some of your cases under this head, you will readily admit the truth of the above assertion. I mentioned it merely to impress the fact that the correct diagnosis of brain injuries is difficult and calls for thought and judgment of the most exacting nature. The diagnosis at once becomes very uncertain, and the patient's life at stake unless the modern methods of diagnosis are made use of in this serious and often fatal affliction. In this particular branch of surgery the success of the treatment, in the more extensive cases, depends upon an early and correct diagnosis.

Don't misunderstand me and consider my emphasis upon correct diagnosis to mean that I am laboring under the impression that to diagnose the injury present means a cure fol-

*Read before the Greenup County Medical Society.

lowing treatment. Not so. But I do say that the present mortality can be lowered by considering head injuries as serious regardless of how trivial the initial injury may seem from inspection, and by using all of the knowledge that you possess, and that you are in a position to call upon, to determine as near as possible the lesion causing the symptoms.

In dealing with injuries to the head a number of possibilities must be thought of, namely, the various types of skull fractures, whether of the vault or the base, extramural and subdural hemorrhage, concussion and injury to the brain itself.

I will limit my remarks, and these briefly, principally to basal fractures and injury to the brain structures, or those injuries most likely to cause a high intracranial pressure. Possibly the first thing to be thought of in all serious head injuries is a thorough examination of the fundus of the eye by the ophthalmoscope. This is an invaluable instrument and an examination is not complete unless this instrument has been made use of by one competent to interpret the condition of the fundus accurately. By its use we can tell fairly well the amount of intracranial pressure, and this should be our most important guide as to the necessity of an operation.

Fractures of the base have in the past been considered as practically hopeless cases. No effort was made other than the routine expectant palliative treatment to combat the symptoms. The opinion was to let well enough alone and give the patient a chance to get well without surgical interference. Some did and some did not, and it is for parallel cases of those who did not that the operation I am about to mention will for a certain per cent. side track the shadows of death.

Quiet and absolute rest, ice bag to the head, liquid diet and vigorous catharsis has for a long time been the only treatment afforded a victim with a consequent high mortality. This method of treatment in the mild cases as concussion and simple vault fractures is ideal, but in those more severe cases where a high intracranial pressure is present and gradually increasing, something more radical and effective is essential.

The operation to relieve this high intracranial pressure is a subtemporal decompression, either unilateral or bilateral, as suggested by Dr. Harvey Cushing. I have been very much impressed with the results obtained by this operation, and to me it appears as the only method capable of overcoming the destructive and most always fatal consequences of a constant high intracranial pressure. The operation itself is not a very difficult one, and the danger to the patient seems to be

slight. I can assure you that this method of treatment has been condemned by some, and I have seen a number of cases succumb shortly after its performance, but there is one thing which holds good here as it does in various other branches of surgery, don't wait until the patient becomes moribund before resorting to the decompression. Operate before the dangerous condition of medullary collapse takes place. It is in reality an operation to prevent rather than cure. Once medullary collapse presents itself a subtemporal decompression is of little avail.

To illustrate I will report briefly two cases which came under my care recently.

Case I. Mr. D., age 24. Patient was hit with a brick, inflicting a scalp wound about 2 1-2 inches in length, immediately over the central portion of the right parietal bone. The accident occurred about the 24th day of September, 1915. Saw patient the first time October the 4th, 1915. Wound had partly closed, discharging some pus, and a fluid which evidently was cerebrospinal. Temperature 106.2, pulse 72, unconscious, paralyzed entire right side, an occasional convulsive seizure. Left pupil smaller than right, aroused by deep supra-orbital pressure, knee jerks, right greater than left, Babinski greater on right, abdominal reflexes both exaggerated, more on right. Examination elicited a linear fracture with slight depression.

OPERATION

Depressed fracture in parietal, extending downward and backward. Trephined. Inner tables comminuted and depressed. Dura torn, and considerable laceration of brain tissue. Brain tissue bathed in thick pus. Large subdural blood-clot extending upward. Abscess in brain tissue which drained about one tablespoonful of pus. Bone ronguered away, blood clot partly removed. Rubber tissue drain inserted below and above, iodoform gauze packed lightly in pus cavity, wound closed in usual way. Had stormy time for first three days, then gradually improved. At present feeling fine and working.

Case II. Male, age 27. Struck by locomotive. Taken to hospital semi-conscious, after laying outdoors for 14 hours. Saw patient first time 48 hours after accident.

Right pupil smaller than left, unconscious. Fracture of right femur and tibia, right humerus fractured at upper and middle third. Colles' fracture right arm. Toes amputated at the tarso-metatarsal articulation of left foot, small scalp wound over occiput, ecchymosis about right orbit, dried blood in nostrils and both ears. Deep supra-orbital pressure brought about a changed expression, likewise did pressure over the base of the occi-

pital bone. Pulse 148, temperature 102.8, respiration 30.

OPERATION

Right subtemporal decompression, local anesthesia. No fracture ascertained, dura under high tension. Upon incising cerebrospinal fluid spurted to height of at least six inches. Cortex extremely edematous. No hemorrhage. Drained and closed in usual way. During first ten hours patient showed marked improvement. Could be easily aroused, restless, pulse dropped to 115, respiration to 24, died eighteen hours after operation.

Both of these cases were overlooked. The fact that neither of the patients in the early hours presented symptoms of unconsciousness led to the belief that the head injury was of mild character.

Case one should impress us with a very important point and that is the comparatively mild presenting symptoms shortly after a head injury, although the damage done may be considerable. In this case a hurried examination elicited nothing. The patient felt fairly well shortly after the accident and in 48 hours was up walking around, and did so for several days, but soon took to his bed, and from a supposedly mild and simple case developed into a severe and serious one.

Case two merely illustrates the futility of operating in these grave cases, and shows the result of delay. I believe had the decompression been done 24 hours sooner when his pulse was around 90 his chances for recovery would have been much brighter.

Itching with Inflammatory Exudation.—Unna here discusses prurigenous skin affections of the type of prickly heat, prurigo and vesicular eczema. There are three factors involved, the solid horny layer, the exudation in the prickle cell layer and the hyperemia in the papillary body. (See summary of his previous communications January 15, p. 227, *Jour. A. M. A.*) The hyperemia is best combated, he says, with dry cold; rubber bottles with cold water are better than moist cold. Cold from evaporation can also be utilized, first applying a paste as indicated for the eczema, and over this a dressing kept constantly wet with water or a solution of aluminum acetate. With this combination of a drying paste and evaporation, the eczema vesicles dry up while the coolness from the evaporation combats the hyperemia and the horny layer softens under the influence of the moisture. The dressings also protect the region against injury from scratching.

ADDRESS OF THE PRESIDENT OF THE PENDLETON COUNTY MEDICAL SOCIETY.*

By JOHN E. WILSON, Butler.

We are beginning a new year. Perfection is seldom reached, or long maintained. No enterprise can stand still. Our experience teaches that our society did not do as much good work last year as it did the preceeding year. We are a unit of force in this county. No chain is stronger than its weakest link. Let us join hand to hand, and heart to heart to-day and remodel our chain for 1916. Every member has gotten pleasure and profit from our meetings in the past. To you members who are frequently absent, I wish to say we know who you are, and we miss you sorely when you remain away. We need you badly, and we have always very much appreciated you when you were present. We recognize your professional ability; will you not come and stick with us and kindly criticise anything you see that is wrong, and take hold and help to make it right?

There may arise between us petty little personalities. It is our duty to self, to one another, and to the people of the community,—I say it is our duty to minimize all this, instead of magnify it. For a lesson, we need only look into a sister county that has no society. No professional blood has been shed in our county, and if you take my advice, there will not be any. It is surely more noble and pure manly to hear, and forbear, than to resent in kind, an unpleasant personal reference.

As long as you do not you are superior. When you do, you become equal or beneath your adversary. One member has encouraged me by voicing a thought that has long been mine,—that is, if we seem to have a personal grievance, to go privately to the individual, and kindly show him your case. I want to tell you it takes manly courage to do that, and none but those who are impelled by a right spirit can do it. This in my opinion, would bring about a spirit of real, and lasting, and enjoyable friendship, instead of an apparent, and a transient, and a disappointing friendship.

Will not every physician in the county who has not done so, come up promptly, pay his dues, and receive the legal protection, and the social and professional fellowship that is coming to you? If you feel that you lack the cordial friendship of a single brother, or more, that is the strongest reason why you should come. Where are you drifting and where will you end if you neglect? Some day you may

*Read before the Pendleton County Medical Society.

want a special favor from the society, as has been the case.

I am not after honors, but I want to leave this society stronger, and not weaker, at the end of the year. What one of you would break an engagement if there were a small fee involved? Yea, I know that I would be there on the minute, and so would you. Now, shall we make the "\$" our only emblem of honor, or duty? I want to kindly ask, and earnestly beg that no man fail to perform on date this year. Do not fail to come for fear there will be something harsh said. It will not come from me. You may call this a sermon. Very well, it is my first for the year, and I promise you it shall be the last.

What I promise you is faithfulness and fairness. Will you pledge the same to me?

I am going to ask the critic to make his office an active one, to be ready at the end of each meeting, and touch upon anything that concerns our welfare. I am now going to encroach upon him for a moment. When you come to town, assemble here promptly. Do not stay on the streets most of the forenoon to see if anyone else is coming. Our time is valuable, and we want to occupy it. We have more for you this year than the printed program. To-day we have, besides our regular program, two distinguished guests, well prepared to teach us something. We shall probably have special features with every meeting.

The man who misses a meeting, I want to make him feel sorry. I want to make him feel that he is in poor company. I want to prove this year that this society is not dead. Then like the poet,

"Let us then be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait."

Ethyl Chloride Anesthesia for Changing Dressings.—Savariaud comments on the difference between the dressings of peace and those required for extensive, ragged shell wounds. When the dressings on these large shell wounds are changed, an anesthetic cannot be dispensed with, and he has found ethyl chloride best adapted to the purpose for reasons which he enumerates. He protects the patient's eyes with a pad of four or five thicknesses of gauze, and then lays a square of oiled silk over the head, large enough to cover the face and tuck the four corners under the head. A small hole is made in it only large enough to admit the tip of the ethyl chloride tube. By spraying it gently, progressive and continuous anesthesia is realized, and it can be kept up at the rate of 1 c.c. for each minute of the anesthesia.

LESIONS OF THE RIGHT ILIAC FOSSA OTHER THAN APPENDICITIS.*

By O. W. BROWN, Lenoxburg.

It is not the intent or purpose of this paper to even attempt to elucidate anything new on this subject, but I believe in this as in all other pathological conditions, it is important that we be constantly reminded in some way the many conditions of abdominal viscera the symptoms of which may, and many times are, very difficult of differentiation.

We are reminded by men of note that one-half of all cases diagnosed by clinical lectures, interns, specialists and men of the most scientific acumen, that they are mistaken or an erroneous diagnosis is made in a large per cent of cases. It is only fitting that we make more strenuous efforts to overcome this most embarrassing condition and not be discouraged by past failures.

The right iliac fossa I believe has come into more prominence (from a clinical standpoint) in the past few years, than any other region of human anatomy, for not many years past this region was not well understood from a medical or surgical point of view.

Now, since the appendix, its anatomy and pathology are so clearly demonstrated, this region furnishes a vast amount of work for the medical and especially the surgical men. It is true we hear very little of this region either by doctors or laymen other than appendicitis, but this is no reason why every pain or discomfort in this part of the body should be appendicitis.

The region of the gall-bladder, pyloric end of the stomach and first portion of the duodenum are all within a very few inches of each other and yet a lesion of one may very closely simulate that of another.

Just so with the right iliac fossa. There we find so many organs in close proximity to each other, especially in the female. The appendix has been accused of every departure from normal in this locality, and justly so I believe in a large per cent of cases.

But we are all forced to admit that many many abdomens are opened for appendicitis and the appendix found perfectly normal. Of course very few outside of the surgeon and assistants are aware of this fact, but this does not clear our skirts of a faulty diagnosis.

The question then comes to our minds in every case of pain or discomfort in this region, if it is not appendicitis, what is it?

Appendicitis being eliminated and out of the question altogether, what conditions may we yet have?

There may be and really are about twelve or

*Read before the Lincoln County Medical Society.

fourteen conditions that may be present in every case of pain in this region, but I consider only a few of very great importance.

The paper confines me to lesions of the right iliac fossa, but some of the viscera outside of this locality when diseased, most closely simulate that of appendiceal inflammation. I believe the disease most frequently confounded with appendicitis is typhoid fever. I recently knew of a case of typhoid fever diagnosed as appendicitis by a man of many years' experience. This patient was advised by his physician that he should undergo an operation for appendicitis when he demanded council. He had great faith in this physician, but told him he would feel better satisfied to have another doctor see him. He ran a typical course of typhoid, and escaped the surgeon's knife when his condition would not have been the best for an operation, by having counsel.

Only a few weeks ago I saw a strong, large man that had slight fever, nausea, pain in right iliac fossa, constipation, pulse eighty, tenderness about McBurney's point, abdomen very fat, and there seemed to be a mass in the region of the head of the cecum.

This patient as well as his family were very positive he had appendicitis, but there were some features about the case that did not point to appendiceal trouble, and I at once informed him, or rather his wife, that he did not have appendicitis, but thought there was fecal impaction which was confirmed by further treatment of the case, which only cleared up after fourteen days.

Acute gastritis may simulate appendicitis as much or even more than the conditions mentioned, but it would only require watching for a few hours to separate from appendiceal trouble. Of course this condition is not in the right iliac fossa, but I am going to take the liberty to mention some other conditions that may very closely simulate appendicitis.

Only recently I read in the *A. M. A. Journal* of a very prominent surgeon operating for appendicitis and the trouble proved to be duodenal ulcer. Ovarian and tubal disease in the female may sometimes give us much difficulty in determining between these and appendicitis, and especially if the woman be pregnant a few months. Of course we have appendicitis in the pregnant woman, but it seems that it is not so common as in the non-pregnant. Have never had a case of this kind, but can readily see that we would have to be guided by general symptoms more than by palpation and inspection.

Acute intestinal obstruction, when it occurs near the cecum may very much resemble that of appendicitis in the beginning of the

attack, but a few hours would be of much aid in reaching a conclusion.

Extra-uterine pregnancy of the right side may also very closely simulate that of a sub-acute or chronic appendicitis, and the menstrual history may be of little help, for the woman may be pregnant and at the same time have appendicitis, but by careful study and getting a clear history the real condition can usually be made out, or at least appendicitis eliminated.

Gall stone colic we must think of when searching for the etiology of pain in this location, for the gall-bladder may be enormously distended and reaching into this region or the appendix may not be located in the established McBurney's point and reach up into the region of the gall-bladder. It seems as though it would be almost impossible to reach any definite conclusions in a case of this kind, and the diagnosis could only be made after opening the abdomen.

The typhlitis or so-called perityphlitis of the older writers, I believe to be a true appendicitis, and only mention it to condemn it as a misnomer, or an erroneous diagnosis.

Acute peritonitis should also be thought of in painful conditions in this region, and may be due to ovarian or tubal disease in the female.

It seems to me that the most difficulty would arise in determining between these conditions and chronic or atypical appendicitis.

One point I wish to emphasize, when confronted with a condition supposed to be appendicitis, is, ask the patient in a sort of a suggestive manner if the vomiting came before the pain? They will all tell you, after thinking, that the pain came first and in every case that I have had operated, that is in acute cases, the appendix was found diseased.

If the vomiting precedes the pain the case is very probably not appendiceal infection. Another point in lesions of this region is the time that we are called to see the case. There comes a great change in the symptoms of appendicitis in a very few hours, in most acute cases and it is here that I believe many lives are lost.

The case may look like some of the diseases previously mentioned and the general symptoms seemingly very much better than they were a few hours previous.

This may seem too radical to many of us, but I believe in all cases of pain in the right iliac fossa, if the case does not improve in every way after the first twenty-four hours, it is only doing justice to the patient and the doctor to advise operation, and see what the trouble is. This, of course, only applies to acute cases where there is a suspicion of ap-

pendicitis. If it proves to be tubal pregnancy ovarian disease, intestinal obstruction, a pus tube, or what not, the patient will have a better chance for an early recovery and perhaps a life saved that otherwise would have been lost by temporizing.

Don't fail to make a vaginal examination in all cases of pain in this locality in the female, for pelvic cellulitis may also be the cause of pain here, or very near McBurney's point. This mistake has frequently been made by the less diligent observer, and finally, if there is any doubt, always demand counsel, it may save you much annoyance.

EARLY SYMPTOMS OF TUBERCULOSIS.*

By B. M. TAYLOR, Greensburg.

When we physicians study disease, we study first the cause of disease. The cause of any disease is directed into predisposing and exacting causes. When we say that a patient or an individual has a predisposition to a disease, we mean that his organs are more susceptible to this particular disease than another individual who is not predisposed to it, or in other words, who is in good condition physically. The exciting cause of any contagious or infectious disease is the specific germ that causes that disease. No one can contract any disease without first getting into his system the germ of that disease.

If I were reading this paper to an audience of physicians, I would deal only with the actual symptoms as they concern a physician. But as I am talking to an audience composed of laymen—men and women of all trades and professions—I must digress somewhat and try to impress upon you that the predisposing causes of tuberculosis are to you the most important of the early symptoms of tuberculosis. To a physician the predisposing causes of tuberculosis act only to arouse his suspicion, but to you these causes are the most alarming symptoms. They are to you the sign boards on the highway of life. They are to you what the red, the yellow and the blue lights are to the engineer as he drives his train with the speed of thought. They are to you what the pickets on the outposts that watch for the approaching foe. To properly study the early symptoms of tuberculosis, then, from your standpoint, we must regard the predisposing causes of tuberculosis as among the early symptoms.

It is most unfortunate, indeed, that most of the laity think that the cough and hemorrhage are the only real or main symptoms of

tuberculosis; that unless we have the cough and the hemorrhage with the annoying night sweats, there is no necessity of being alarmed about tuberculosis. Tuberculosis can exist in your lungs to a large extent for years without the slightest sign of a cough or hemorrhage. In fact, the cough and hemorrhage are only the symptoms of a disease that has existed for some time. These are the later symptoms of the disease. If the people of Kentucky could learn this, there would be fewer deaths every year from tuberculosis. These symptoms are to us what the smoke and the bursting of flames in the building are to the fire department. The early symptom of this fire was the carelessly tossed match or the defective flue. How much easier would it have been to the fire department and how much less damage done to the building if this early symptom had been discovered by the fire department. So, if we wait for the cough, the alarm is oftentimes turned in too late. No conflagration would ever occur if the predisposing cause or the early symptoms were looked after. Just so no case of tuberculosis would ever be lost, if we could always discover the first symptoms. The words, "too late" are as sad physically as they are spiritually.

To make a thorough bred gentleman or lady we must antedate the cradle. Environment has much to do with it, but to be eminently successful we must first have the soil. This is true of tuberculosis. We may have the germ, but unless we have the soil in a weak vitality, there will be no tuberculosis. Predisposition to tuberculosis comes either by inheritance or a disobedience to the laws of nature. Anything that lowers the vitality renders one a suitable subject to tuberculosis.

So in studying the early symptoms of tuberculosis lets go to the first early symptoms from your standpoint. Moses must have been a pretty good physician and understood the law of heredity and disease when he said: "Visiting the iniquities of the fathers unto the third and fourth generation of them that hate me, and showing mercy unto thousands of them that love me and keep my commandments." This is just as true physically as it is spiritually. If the father has sown a liberal crop of wild oats, and the harvest of which nets him a case of syphilis, he transmits this to his offspring. The unfortunate child inherits a weak and lowered vitality, which easily falls a victim to disease. To a doctor this is a predisposing cause; but to you it is an early symptom. If the father has spent a life of dissipation, he may transmit to his offspring a lowered mental and physical vitality, which may be an easy prey to any disease. To a doctor this is a predisposing cause; but to you it is an early symptom. If you

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are run down from overwork in office, or from any mental or physical strain, or from any disease acute or chronic, the germ of tuberculosis that you breathe in with the dust of the streets will find suitable soil in your lungs and you will develop tuberculosis. To a doctor this is a predisposing cause, but to you it is an early symptom. Mothers, if you are not rearing that child scientifically, by having regular hours for its feeding, its rest, its exercise, its baths, its sleep; but upon the other hand if you are nursing it every time it cries and you have no regular time for its rest, its sleep, its exercise and its fresh air, you are committing a crime against childhood and manhood and you are rearing it only for food for germs. Tuberculosis claims its share of these. To a doctor this is a predisposing cause; but to you, mothers, it is an early symptom to warn you of what will happen. The germs of tuberculosis are as impartial as the laws of nature. They ask no favors and they confer none. They accept every opportunity offered. They bury the rich along with the pauper. The lowered vitality in the mansion stands side by side with the lowered vitality in the hut.

Are you the last child of an overworked mother with a large family? If so, you have not the vitality of the first child and you have a harder struggle against disease. To a doctor this is only a predisposing cause; but to you, it is an early symptom. Do you sleep in a poorly ventilated house with the windows down and fresh air only on the outside? To a doctor this is a predisposing cause; but to you it is an early symptom.

I have been using these predisposing causes as early symptoms to impress upon you the importance of keeping your health up to the highest standard if possible in order to prevent tuberculosis. It is much easier to prevent it than to cure it, to say nothing about the inconvenience it causes.

I want to again impress upon you that tuberculosis can exist in your lungs to a great extent for years without a cough, so you must be familiar with the real early symptoms of tuberculosis in order that you may suspect the trouble before the cough appears, as the usual symptom. To wait for this common symptom will often times put you in the doubtful list to say nothing of the valuable time that has been lost. About the first symptom that you will notice will be that you recover from colds and coughs of an acute nature slower than is necessary—an acute bronchitis makes you consult your physician oftener before it is cured than your neighbor or friend. You are slow to recover from any little trouble—you are easily fatigued and susceptible to all changes in the weather—you frequently say

that you can not stand things like Mrs. So and So. If you are nursing a child, you become very weak and anaemic before the baby is weaned and frequently this will have to be done before it is time. If you attend a dance, or do a day's shopping, or spend an afternoon or evening at cards or a reception, you will find an elevation of temperature of about one-half to a degree, and you feel a little flushed and tired, and your sleep that night will be broken and unrefreshing. The next day you will feel the effects of the day before more than your friend who is ready to repeat it. If you are a housekeeper or have any work to do, you will feel the effects of every day's work more and more. As the days go by your appetite becomes irregular and you begin to lose a little weight. After the course of months you are inconvenienced so that you will consult a physician. If he is careless and does not take your blood pressure, he will prescribe a tonic to brace you up. This will help a little while you are taking it. As the days roll by and you continue your duties and the effects of the tonic wear off, you begin to feel a return of your symptoms with more pronounced effects. You return to your physician who prescribes another tonic, and if he is an anti-State-wider, a bottle of beer daily. All the time he is playing into the hands of the germs of tuberculosis, which are making hay while the sun shines. They waste no time in taking advantage of every opportunity. The beer soon deranges your digestion and the germs score another victory. Tuberculosis germs will not be a guest where the host has good digestion and assimilation. You return to your duties and the effects of this tonic wear off. Then begins the symptom that you have so long looked for—the cough. Then you begin to be suspicious about going into consumption, when, in fact, you had been in it all the time. You return to your physician and ask that he examine your lungs. To his and your dismay he finds tuberculosis deposits in both lungs. Then and not until then does he begin the treatment of your trouble. He has lost months of the most valuable time. He has allowed you to drift into the doubtful column. He orders you to take a rest that you should have taken months before.

My friends, I trust that these few remarks will impress upon you that "a stitch in time saves nine" applies to tuberculosis as well as it does to garments, and that you will always have a complete invoice of your physical liabilities and assets.

Remember that anything that lowers your vitality renders you susceptible to tuberculosis and to you this should be an early symptom.

THE NORMAL PUERPERAL STATE.*

By J. F. DUNN, Arlington.

The puerperal state comprises the space of time beginning with the close of the third stage of labor and terminating when the woman returns to her normal state of health. As each case is practically a law unto itself, and as there are so many obstacles that may be met with, it is impossible to determine accurately the length of the puerperium.

The Indian squaw of ancient times gave birth to her child without delaying the march of the companions, but to-day the situation is quite different. Women of to-day have not only inherited a weakened physical condition, but they have furthermore acquired it by tight lacing, high-flying, etc., the result being that instead of the act of parturition and the puerperium being a pure, simple and physiological one, it now verges on a pathological one.

The process of labor involves a great amount of muscular energy, loss of blood and strength, which, together with the chilliness of the body, from necessary exposure, causes a loss of tone and thereby starts your patient into the puerperium weak and almost prostrated.

The pulse which has been quickened by the act of labor should, inside of the first hour return to or below normal,—failing to do so, the physician should suspect hemorrhage and stay close by until he considers his patient safe.

He should see that the uterus remains firmly contracted. If it fails to do so, a hypodermic of pituitrin will bring it about quickly.

After patient has rested a while the physician should sponge patient (using, of course, aseptic precautions), change the gown and bed clothes. Hot water bottles should be applied if needed to maintain the warmth of body.

Patient should be instructed to remain in bed ten days or two weeks, after which, if everything has been lovely, she may be allowed to be up, but should not return to work for several days afterwards. Impress on them earnestly the danger of leaving the bed too soon.

The patient may be assisted out of bed to the chamber for the evacuation of bowels and bladder. I prefer this to the use of the bedpan as the erect posture allows the escape of blood-clots from the vagina, which otherwise might be retained and cause putrefaction.

The nurse or attendant should be instructed to sponge patient daily with strict aseptic precautions, first washing her own hands in a bichloride solution and using a 1:4000 bi-

chloride upon the patient. The patient's clothing and bedding should be changed at least once a day. Sanitary napkins or aseptic gauze should be applied to vulva often. No douching should be done unless absolutely necessary.

The diet for the first three or four days should be light but plentiful consisting of milk, eggs, toast, etc. Later, when the danger of sepsis is passed, solid foods can be allowed. The woman needs plenty of food not only for recuperative purposes but to enable her to stand the strain of lactation. Plenty of water should be given.

The bowels and kidneys must be kept active. The bowels should act once daily, failing to do so the patient should take a mild laxative. Catharsis must be avoided if possible.

The child should be put to the breast in one or two hours after delivery, and should continue to nurse from time to time even though the milk has not been established. The nipples should be cleansed before and after nursing with a boric acid solution, and then covered with sterile gauze. To prevent fissures of the nipples an application of sterile olive oil after nursing is useful.

If the after pains are too severe, bromides, chloral and deodorized tincture opii may be given.

If the breasts become over-distended, hot wet cloths may be applied and the amount of fluids decreased.

We were instructed to see our patients daily while in bed, but in country practice we can not well do so. My rule is to see them on the second or third day and no more unless I am called back. Too many visitors should not be permitted.

Medication. Of course complications must be met as they arise. But in a normal case very little medication is needed. A little ergot may be given to secure firm contractions of the uterus. For the prevention of subinvolution, Edgar, on obstetrics, says, ergot and quinine have apparently no effect, but his best results in ten years' observation were obtained by the observance of the following rules:

- 1st. Strychnine during the latter part of pregnancy and the first ten days of puerperium.

2. Rotation of patient in bed.

3. Use of the commode at side of bed, favoring drainage.

4. Massage and exercise.

5. First use of the corset, which should be so constructed that the abdomen be supported, pressure being made upward and backward instead of downward as is commonly used.

*Read before the Carlisle County Medical Society.

The general health should be looked after—when the patient has left the bed, as they sometimes need building up—to meet this demand may be given tonics such as iron, hypophosphites and cod liver oil.

ASTHMA.*

By J. M. HAMILTON, Shawnee, Tenn.

Etiology and pathogenesis of bronchial asthma on the conception that essential bronchial asthma is a functional neurosis, that is, a condition of which as yet no organic basis has been discovered, characterized by sudden paroxysmal attacks of great dyspnea, with a peculiar exudation of mucin and with distension of the lungs. The attack may last a few hours or days, or may be protracted for a week. Under the heading of essential asthma we must therefore include those clinical conditions in which the respiratory organs are normal, and the attacks are produced exclusively by some perversion of the nervous system, in which finding no objection can be formulated from an atomic point of view. The mechanism of intense dyspnoea which characterizes the asthmatic paroxysms may be considered as definitely settled. It is the consequence of a sudden narrowing of the smallest bronchial lumen. So sudden is its onset and so intense may the dyspnea shortly become that even *prima facie* the idea of spasms seems alone adequate to account for it. The view formerly held almost universally maintained that the asthmatic dyspnea was due to a tetanic contraction of the inspiratory muscles and diaphragm as well as to a spasmodic contraction of the bronchial muscles of the lungs. I believe that swelling of the mucosa is associated with a bronchial spasm. I believe that bronchial asthma is a neurosis like hysteria and epilepsy of the higher cortical center, which according to Broker, Martin, Frand, and others, presides over the lower center and by means especially of the Bulbar centers directs and controls the respiratory movements. This association action of the more complex centers takes place under appropriate stimuli parting from the brain.

The curious case of sudden asthmatic attack from fright or fear demonstrates the enormous influence of the cortical centers on the respiration. I believe that every case of asthma should be looked upon with suspicion for I think in a large per cent. of our asthmatic cases we have the tubercle bacilli present and each case should be examined carefully and without fail.

TREATMENT

In the treatment of bronchial asthma I find morphine most efficient in relieving the paroxysm but the danger of forming a habit should assign it to the position of a remedy of last resort. Adrenalin administered hypodermically in such paroxysms frequently relieves the paroxysms, probably by relaxing the bronchial spasm. This relief is wonderfully rapid. In many cases it is also lasting and the patients have a rest for longer periods than after being relieved by other means. The sheet anchor in the treatment of bronchial asthma is iodine, usually in the form of potassium iodide. The practically unanimous testimony of patients is that under its administration the paroxysms grow much less frequent and of less severity. It is not necessary to give large doses of the drug, therefore it is usually possible to avoid any disturbance of the stomach. A prolonged course for several months of from five to ten grains of potassium iodide, three times daily, should first be given and thereafter these doses should be given for periods of ten days, alternating with ten days of rest. Another favorite prescription is to direct that the iodide be taken for the first ten days in every month with either of these methods it is possible to keep up a sufficient saturation with iodine to bring about excellent therapeutic effects without causing any of the undesirable by-effects of iodism. Also heroin hydrochlorid in cardiac asthma instead of morphine, as it maintains its effect for a longer time and given in small doses produces no ill effects.

The Colon Bacillus in Pneumonia.—Windrath relates that within a period of ten to fourteen days eight of thirteen persons obtaining water from a certain well developed acute bronchopneumonia. Colon bacilli were found numerous in the drinking water. Extremely virulent colon bacilli and also scanty pneumococci were found in the sputum. There had been no rain for five weeks, and the region was much infested with rats. The pneumonia in each case had been preceded by a few days of gastro-intestinal trouble.

Graphic Record of Atonic and Paralytic Conditions.—A long narrow strip of sheet lead is fitted over the ankylosed or paralyzed limb, molded to its contour. The strip is then laid on paper and its inner curving outline traced on the paper. By repeating this at intervals the improvement under treatment can be traced with precision. Three of these goniograms, as Jacob and Sezary call them, are reproduced.

*Read before the Bell County Medical Society.

APPENDICITIS.*

By G. W. PAYNE, Bardwell.

Appendicitis is a modern disease in name only. The older writers called it typhlitis and peri-typhlitis, etc., until the lamented Dr. McBurney gave us a vivid description of this prevalent disease, so that in an uncomplicated case, we seldom err in our diagnosis. The question is often asked—"why do we have so much appendicitis? Twenty-five years ago we never heard of such a disease."

I think we can attribute the first reason to the rapid strides in medicine and surgery, and the increased ability of the medical profession to diagnose appendicitis, as well as every other disease. This ability is due to the efficient county, state and American medical societies and the excellent post-graduate medical schools throughout the states, and the inclination of every up-to-date doctor, to increase his store of knowledge by taking post graduate work and attending medical societies.

Organization is the foundation of a more thorough medical profession. We see cases of appendicitis now that was formerly called belly-ache. The laity seem to understand that pains in the abdomen have some significance other than the belly-ache, therefore they call a doctor to diagnose their case instead of taking it for granted that it is just the colic.

The second reason is, the country is more thickly populated, and we have more people to have it, and the swift pace we are traveling.

Dieulafoy sums up the cause of appendicitis in the following words:

"Appendicitis results from the transformation of a part of the appendicular canal into a closed cavity, which becomes a focus of infection and intoxication, due to the increased virulence of the imprisoned microbes.

The canal may be obstructed either at its cecal orifice or in its length by a calculus, by inflammatory swelling of the walls, due to infection of the mucous membrane, of the walls, by twisting, by kinking or by strangulation of the appendix. The obliteration may be temporary or persistent. It matters little whether the obliteration is due to a calculus, strangulation of the appendix, swelling of the infected walls or kinking of the tube. The essential fact is that "the portion of the appendicular canal below the obliteration is converted into a closed cavity."

The microbes, which in their normal state were inoffensive, (as are all the microbes of the intestine, when free), are now imprisoned, and therefore able to increase their virulence, as shown by Klick's experiments, and

to give rise to acute toxi-infection. From this moment appendicitis is present, and if the microbes imprisoned are endowed with sufficient virulence, abscess, perforation or gangrene of the appendix may result, or else the microbes may pass through the appendix and reach the peritoneum: or again the toxins and microbes may reach the veins and infect the whole system thereby endangering the patient to multiple complications which are dangerous. If by chance the canal is opened and drains itself before any material damage is done to the appendix, the inflammation soon subsides and convalescence is established at once.

SYMPTOMS

Appendicitis, as a rule, has a rather sudden onset. The patient has felt perfectly well, when he has a sudden pain in the ileo-cecal region, as a rule, but not always, for I have seen patients when the pain in the beginning was on the left side, and again when it was around the umbilicus and radiate all over the abdomen. This is especially true in children, but within twenty-four hours it will locate itself over McBurney's point. The patient lies with limbs drawn up. Very often there is nausea and vomiting, the bowels are constipated as a rule, respiration becomes superficial if the pain is severe. Some cases begin with a fairly high temperature while others have very little. The temperature is no criterion to go by. The pulse rate as a rule runs from 80 to 100. On inspection sometimes we can recognize some swelling in the ileo-cecal region early. On palpation we find an increased muscular rigidity of the abdomen in the region of McBurney's point. This may be very considerable or comparatively slight. If there is a tumor, it can usually be made out.

Not infrequently, after three or four days of the disease, we have a marked remission of all the symptoms, and in the favorable cases convalescence ensues. But if there is a recrudescence of the fever we should be on the alert. For renewed elevation of the temperature after the fourth or fifth day always indicates an aggravation of the local process, particularly the onset of marked suppuration.

I will report a few cases that were operated on which proves, to my mind, the theory of the closed cavity.

Mrs. B., had had attacks of colic for several years, she attributed these attacks to indigestion; they would come on after a hearty meal, the pain would radiate around the umbilicus and sometimes up in the region of the gall-bladder. These attacks would last from a few hours to two or three days. I saw her in two attacks before she was operated on and I found pain, tenderness, nausea, and rigidity

*Read before the Carlisle County Medical Society.

over McBurney's point, with a temperature of 99 1-2 degrees. When the abdomen was opened and the appendix was exposed, there was a kink in the appendix.

Case II. Was called to see Miss T., and found her suffering with a severe pain over McBurney's point, nausea and vomiting. Temperature 103 degrees and constipated, rigidity of muscles with limbs drawn up. Advised operation, patient refused. Three weeks later when patient had developed peritonitis she consented to an operation. Opened the abdomen and found the appendix had not ruptured but the canal was obstructed near the cecal orifice by an inflammatory swelling of the walls and the peritonitis was due to the migration of the microbes through the walls of the appendix.

Case III. Child six years old complaining of pain over McBurney's point, with rigidity of muscles, nausea, rapid pulse, constipated temperature 102 degrees F. On removing the appendix we found a calculus in the appendix.

I could report several more cases that would support the theory of the closed cavity, but time and patience will not permit.

TREATMENT

In the country the treatment has to be divided into Rest and Surgical. Because there are a great many people that absolutely refuse to be operated on or have their friends and loved ones subjected to the knife.

Under the rest treatment I forbid all nourishment for a period of from three to ten days depending on the severity of the case. I never give calomel, compound cathartic pills or salts. I use just enough opiates to prevent peristalsis. This acts as a splint to the appendix. I use an ice bag over the appendix and unless there is pus, the ice bag relieves the pain.

A low enema will unload the rectum and after the inflammation begins to subside the bowels will resume their normal function.

Surgery is the only hope and the only remedy for appendicitis.

Action of Digitalis on Peripheral Blood Vessels.—Golovinsky studied the action of digitalis on the peripheral vessels of dogs, rabbits and frogs. He used digipuratum in various concentrations (1:5,000 and 1:1,000) which he passed in Ringer's or Locke fluid through the isolated ears (Kravkoff's method) or through the splanchnic and the portal systems (Frohlich's method). He found that solution of digipuratum in doses that may have a therapeutic effect do not affect the lumen of the peripheral vessels of the regions examined, skin, splanchnic or portal systems, while toxic doses caused dilatation. The increased cardiac activity.

COLDS. THEIR SIGNIFICANCE AND THEIR TREATMENT.*

By H. T. CROUCH, Bardwell.

Cold, as defined by Dorland is: First, privation or relatively low degree of heat.

Second, a catarrhal or other disorder due to cold and wet.

The first definition stands pat. The second, on account of the words "or other disorders," requires us to point out the "other disorders" which are due to cold and wet. I shall refer to them now and then while speaking of "colds" or "catching cold," or catarrhal conditions as they are generally understood by both the profession and the laity.

We all understand that when the human body is exposed to an abnormal low degree of temperature, that its surface becomes chilled and that the warmth giving arterial blood recedes from the capillaries and arterioles of the skin, to the larger blood-vessels beneath it producing a congestion or engorgement of the latter vessels, and the degree of congestion depends upon the degree of abnormally low cold exposure, and also the length of the time exposed. The resultant effect or morbid condition varies then from a slight, to a severe reaction, from this congestion producing chilly or aching or painful sensations, resulting sometimes in chilblains or "frost-bites" or gangrene of the surfaces exposed to the cold. The internal surface and organs may be disordered from slight congestions to severe and even fatal inflammations. And severe cold, by the abstraction of heat from the human body, freezes it to death in a very few hours. While death by freezing (from cold) is not uncommon in our northern states and cities, yet it fades into insignificance when compared to the thousands of deaths which have been assigned to "catching cold" as an initial cause of death. Indeed it was only five or six decades just passed when nearly all the teachers and the text books in medicine, began their etiology by emphasizing cold, or cold and wet, as a factor in seventy-five per cent of the disorders treated of.

Lister, in about 1880, began to teach the bacterial origin of diseases (or disorders) and the mist began to clear up some. Since then thousands of investigators have been, and are now, working on the causation and prevention of diseases. And to their credit, many microbes have been isolated and proven to be the special infecting agent in several heretofore very fatal maladies which now are easily controlled by using the proper bactericide. But, notwithstanding all these great discoveries,

*Read before the Carlisle County Medical Society.

the significance of cold as a factor in disease has lost but little of its power.

Listen. The modern consensus of opinion is, that the healthy, vigorous, human organism, can resist the presence of the most virulent bacteria, but when unduly exposed to cold its vital resistance becomes so depressed, that it becomes an easy prey to the ever present infecting bacteria. Thus while the infecting microbe has slain its thousands, cold, by its depressing effects has slain its tens of thousand.

There are some very interesting theories as to the *modus operandi* of cold on the human system. Among them is Thompson's in his Clinical Medicine. His first chapter opens with "Pathology of chill affecting localized areas of skin." He says "Outside of hot, moist climates the most common cause of disease and of death is from 'catching cold' and the disorder however local, is always caused by an interference with the supply of arterial blood to the part.

Quoting Overbach's experiment,

"By clamping the renal arteries for forty minutes caused albuminuria for twenty days." and adds that "It was further found that any local shutting off of arterial blood will promptly induce nutritive changes in the territory of that arterial distribution and this is at least analogous to the local inflammatory changes, which we trace to 'catching cold.' This theory grows out of the well-known fact that the arterial flow is under the regulation of a special department of the nervous system, called the vasomotor nerves.

This is well shown in the circulation of organs, which are in symmetric pairs, such as the two eyes, two hands and two feet. But this association does not obtain, in the pair—organs which are not symmetric. Such as the two lungs or the two kidneys. An illustration of symmetric pair organs can be made by placing a thermometer in each axilla, and one thermometer in the left hand, while the right hand is plunged in ice water. The thermometer in the left hand will fall from two to five degrees F., from arterial contraction in it, while those in the axilla are unaffected. If the semitransparent ears of a rabbit be held up to the light, the readily seen pulsations of the arteries are seen to cease when the other ear is pinched. These experiments (Overbach's) show that the integrity of the tissues of a most important organ can be seriously deranged by only a very temporary withdrawal of arterial blood. Again, Thompson says, "It is evident that 'catching cold' is a very different thing from being chilled by cold, that is, from a general cooling of the blood: for its most typical, as well as its most disastrous results, may occur while a person

sits with his entire body wrapped in winter clothes, but the feet meanwhile soaked from walking in a melting snow. A cold draught on the back of the neck, however induced, may according to individual susceptibility, cause a rhinitis, a pharyngitis, a laryngitis, a bronchitis, a pneumonia or a pleurisy. We must look to the nervous system for our chief explanation for such purely local impressions of cold causing such widely distributed organs mischief or disorder. Whatever interferes with the arterial circulation of blood though it be but a short interference, nevertheless produces serious damage to the tissues. Vasomotor nerves are but rarely acted upon by a general stimulant or irritant. Instead, vasomotor stimulants are definitely local and yet subject to certain laws. An understanding of these laws will throw much light upon our subject of "catching cold."

The first law is, the intimate association of vasomotor nerves supplying symmetric organs in pairs. We have illustrated this, in the two hands. A second law is, the intimate association between the vasomotor nerves of any area of the skin and those of the internal parts underneath that area.

This is an important law, as it affords an explanation of a great many clinical facts. Thus external applications, according to their nature, can produce marked stimulative or sedative impressions upon the circulation of parts underneath that area. This explains how a poultice may relieve pain and inflammatory irritation, when applied to the skin over the organ, or later, when acute symptoms subside and passive congestion lingers, counter irritants, as iodine or fly blisters, etc., to the skin, actively stimulates the internal circulation to the organs underneath. Again this law has an obverse application of much importance. Every internal inflammation causes a marked hyperesthesia of the skin over the inflamed organ, which leads to any irritation of it being reflected inward to the aggravation of the inflammation.

We are also to understand that through the vasomotor system special associations occur between certain widely separated parts of the body. All vasomotor nerves are particularly susceptible to the irritant impression of cold. Of this fact we have numberless examples. The menstruating woman, from cold and wet feet, has suppression of menses, chronic endometritis, cystitis and urethritis are made worse. So are chronic kidney troubles and those of the respiratory tract and the circulation in the meninges of the brain and spinal cord is so disturbed through the vasomotor reflex from cold feet that it stands as a causative factor in meningitis. Another important association is between the nerves arising at the

nape of the neck and the whole arterial circulation of the head and face: in fact Thompson says that at the nape of the neck is the chief executive office which presides over the circulation. Above the diaphragm, including of course the mucous membranes. Cold applied to the nape of the neck will often arrest nose bleed. The most extensive inflammations of mucous membrane may result from a prolonged exposure of the back of the neck to a cold draught. It is the fashion just now to cut the hair short and shave the neck high, no wonder that all the children have "bad colds" and sore throats. It is significant to remember that in "catching cold" that the arterial circulation to the part affected is cut off long enough that a lesion results, and the ever-present bacteria, finds a field for infection and according to its kind and virulence will be the disorder that follows the infection.

I have endeavored to point out the *modus operandi* of colds or "catching cold" and some of its disorders. Now the treatment is, First, preventive; second, remedial agents to assist Nature to a cure.

As the healthy, sound vigorous body can resist almost any infective microbe, we should endeavor to live up to the hygienic laws of nature, exercising the knowledge which nature has given us. As almost by instinct, as do the lower animals, we know when we are on the border-land of danger from cold or heat and to be wise we should retreat and protect our bodies with proper clothing so that the sensitive vasomotor nerve areas and their special centers will not be unduly impressed from prolonged exposure to cold.

Remembering too, the areas of skin whose nerves are guarding diseased organs underneath it, should have especial protection. I believe woolen underwear is the best material for protecting the body from cold in both winter and summer, heavy or light, according to the season. Nature has so clothed all the lower animals and birds. They shed the heavier for the lighter robes just with the changing seasons.

Can the human do any better?

Again, we should be temperate in all things, in eating, drinking, working, playing and sleeping. Remembering that "cleanliness is next to godliness" and that while we follow these natural laws and breathe nature's fresh air both night and day we will most likely remain sound and healthy.

The remedial agents for curing "colds" is most effective when administered early in the attack. Rest in bed between blankets, a hot foot bath with some mustard in the water and then a hot brick to the feet, a good laxative, castor oil or *easearasagrada* q. s. Limit food to light easily digestible articles. This

regimen will usually aid nature to throw off a cold in a few days. But in many individuals who are predisposed to "catching cold," who have chronic disorders, and in children there is always absence of resistance to "catching cold," we must further aid nature by adding to the above remedial agents, such drugs as ipecac or tartar emetic, squills and some form of opium or phenacetin or bromide potassium, the effects of which are to relax vasomotor spasm, produce diaphoresis, diuresis and also an anodyne effect, quieting restlessness and pain. In convalescence, strychnine and iron.

In sthenic adults, one dose of quinine, eight to twelve grains, given at the time of the first laxative, will often abort a cold in twenty-four hours. Little children, always restless, when sick, should sleep in flannel nightgowns with foot-pockets, to protect them from chill of cold when they kick off the covers.

PRESIDENT'S ADDRESS TO THE CARLISLE COUNTY MEDICAL SOCIETY.*

By H. A. GILLIAM, Milburn.

I have had the honor and pleasure of being President of this society for the past year, it is an honor that any of us will appreciate.

As my term of office expires to-day, it becomes my duty, which has always been customary of the retiring president to deliver an address. As I am no orator or writer; what I have to say will be short, and I hope you will not feel bored if it does not come up to the standard.

I have felt that the medical profession was largely to blame for the stigmata that is sometimes cast upon us.

If you have family troubles and want other people to talk them then go to talking and tell them yourself first and the people will soon side in with you and decide that you have a terrible family.

Now this is largely the trouble with our medicine family; we do too much talking about each other outside of the family, which puts us all in a bad light. We should all try to conduct ourselves in such a manner that we would be looked upon as being truly honest and upright in all our dealings, medical or otherwise and never cast any reflections upon any one of our fellow practitioners.

The medical profession is one of the most important and is being accorded its proper place more so every day.

This is being brought about by the medical men coming to a better understanding with

*Read before the Carlisle County Medical Society.

one another through our county, state and National societies.

Take our medical societies away and we will soon be back where we stood a century ago.

The more we associate with one another the better we understand each other and so the greater becomes the ties of friendship and fellowship.

Our local gathering together to discuss and exchange ideas and thoughts is doing more to put us in our proper place before the public than anything. It dispells that feeling of jealousy and envy toward each other. It makes us feel more like we felt toward one another while going through college. I don't believe there was a single traitor in my class, we all pulled together. If one of our classmates got in trouble we were ready and anxious to help him out in any way that was honorable.

This kind of feeling, instead of that jealous, envious feeling, is the kind that is permeating the medical profession more and more every day. Some of us have this brotherly feeling more to the fellow who does not come in competition to us than we do to the one that does; now this should not be the case, but why is it so?

It is largely because we all have a desire to have our patrons think that we know more than our competitor and because of that desire, we are sometimes inclined to belittle the doings or sayings of such competitor and about nine times out of ten our competitor is told what we have said about him. We may think we are saying it to a very close friend but maybe just as close a friend to the other fellow.

A great many times this criticism of our competitors is done with a hidden hope of getting some of that competitors patrons.

We doctors are to blame for the majority of law suits that are brought against us; if when a patient or any one else comes to us telling us about how a certain doctor treated him or some of his family, we would reserve our opinion and not express to him what we thought of the other doctor's treatment; it would go a long ways toward keeping down law suits.

We are too much inclined to want to point out the other fellows mistake to the people; if while we were doing this we would be honest enough to take it time about and every time we pointed out a mistake of the other fellow we would also tell of a mistake we had made ourselves, we would soon realize that we had made as many, maybe more and worse, than the other fellow.

So let us band together as a band of true brothers and try to protect the interest of each other and never by word or action cast a re-

flection on any of our fellow practitioners; then when we have done this much, will the laity come to respect the medical profession as it should be respected; the noblest and grandest profession on earth, excepting none.

Why are we practicing medicine? For the sake of humanity and the popularity? Why does the lawyer practice law? Why does the merchant his merchandising, or any other fellow his profession? The main and biggest reason is because he can make a living that way easier than he can in other ways and because he likes his particular profession. This business of practicing medicine for the glory there is in it alone does not appeal to me, if it did I would join the mission. If I can't make a living and some above I am not fulfilling my duty to my family.

The medical man is the poorest paid man of nearly any profession, and it is largely because we doctors won't stick together. We do a large amount of charity practice which, of course, is alright to the fellow who deserves it, but we are imposed upon by the fellow that could pay but won't pay and we can't make it out of him; these are the fellows that we should turn down.

There is one other thing that I think that we should all do! that is to carry a smaller line of drugs and do more prescribing. We ought to get a law passed making it a penalty for the druggist to re-fill a prescription without our order, it cuts a big hole in our revenue to undertake to buy all the drugs we use and the probabilities are that if we try to carry all the drugs we use that we will remain in bondage to the wholesale drug man as long as we are in the profession, then why not write prescriptions thereby receiving pay for our service instead of vending out a lot of medicine like a patent medicine peddler and having our patients say: what is your medicine worth?

If you give him 50 cents worth of medicine and charge him \$1.00 he kicks, so if you charge him the 50 cents you only get pay for the medicine and nothing for his time, knowledge and service.

If you give him a prescription you get pay for your service, then, too, if we prescribe we have a larger stock to draw from and can give our patients better service, nor or we so apt to become a routinist.

With many thanks for the honor bestowed upon me, I leave the chair to my successor and assure him that I am ever ready to do anything in my power for the betterment of our county society, which I think is the best in the State already.

ROADS, THEIR DISEASES AND TREATMENT.*

By T. T. GIBSON, Middlesboro.

At first thought this would seem an inappropriate subject to read before a body of medical men but upon second thought who should be more interested in roads than the members of the medical profession. Does not the busy practitioner use them as much or more than any one, and does he not have to travel them all or does he have a select road over which he may answer all emergency calls? He is not only interested in one road through the county but interested in the cross roads as well. Then why should he not go to work helping to get macadamized roads throughout the county, of course building the main roads first.

DISEASES

Nothing can be said about the diseases of our roads that would enlighten us half so much as to go on foot, horseback, in buggy, wagon, sled, or automobile, a few miles through our county (and many other counties). This would show us that our roads are very badly diseased and are in need of prompt treatment. What is the diagnosis of these afflicted roads? Neglect, poor road laws, and no road respect. Consequently our roads are made up of mud holes, bumpy stones, hillsides, washouts, and heavy grades, a combination that is a hindrance to progress, civilization, the medical profession, and all things that are good.

TREATMENT

Under treatment there is much to be said and much more to be done. I think it would be well for us to consider the system of road building in Old Virginia and try to improve on that.

Their system was instituted in 1906. They began work in 1907 and 24 miles of road were built that year in the state. In 1908, 51.8 miles of road was built under this system; in 1909, 137.58 miles, 1910, 290.07 miles; 1911, 395.86 miles; 1912, 542.63 miles; 1913, 619.33 miles, so to-day Virginia has 2,061.27 miles of good roads, while prior to this present road law their roads were about like our Bell County roads. In 1906, Virginia got a State highway commissioner who has a general supervision of the construction and repair of the main roads of the State. This commissioner who must be a Civil Engineer, is appointed by the Governor and he has as members of his board for official help or assistance, the Dean of Engineering Department of the University of Virginia, Professor of Civil En-

gineering Virginia Military Institute, Dean of Engineering Department Virginia Polytechnic Institute. He also has as officials and employees of the department, an Assistant Commissioner, Assistant Engineers, Bridge engineer, assistant bridge engineer, and clerk.

When the citizens of any county decide they want good roads they have an election to bond the county for so much. After the election is carried and local funds provided for, they apply to the State Highway Commission for convict labor. The State Prison Superintendent supplies them with convicts, the state feeds, clothes, shelters and guards them, the county bearing the other expenses connected with road building, all of which I think is good and advisable, except the way the counties provide their local fund. Why could not Kentucky pay as we go and not bond the counties. Take Bell county for example, as it is the one we are most interested in. Our assessed valuation is about \$8,000,000. Let us begin this year to raise 35c on the \$100.00 for road fund. If we collect that this year we will have \$28,000.00 road fund on hand to begin work with next year. Let us get a camp of 100 convicts working under a system similar to that of Virginia's and put them to work next year. They will build according to Virginia's statistics about 10 miles of road per annum. We have in the county about 100 miles of frequently traveled road. We could build the main line through the county in about two years and complete them all in about ten or twelve years and by collecting the 35c on the \$100.00 each year and buying in the beginning, wagons and teams and road machinery, we could have them paid for when the last stone was rolled and instead of having bonds to refund and a big interest to pay, we would have every dollar paid and then we could use the same money each year to keep them all in good repair.

According to Virginia statistics the road leading from Cumberland Gap to Boones Path, Virginia, was built partly by contract and partly by convicts, the five miles and portion thereof built by contract cost over \$7,000.00 per mile, the remainder which was bid at 5c more on the yard than the first contract, was built with convicts at less than \$2,500.00 per mile. According to this 10 miles per year would cost us about \$28,000.00, amount collected. Why is it that our State laws cannot be amended to give us a road building law similar to this so that in a few years time we can leave the mud holes and have pike roads up every creek and hollow in the county.

A few other reasons why our convicts should be put on our public roads:

First, the health of the convict. Take a

*Read before the Bell County Medical Society.

number of men and put them together, two or three thousand strong. Confine them within the prison walls, shutting them off from God's pure air; place them at the desk or at the bench, making shoes and clothing and other articles, feed them the food of a laboring man such as corn bread, cabbage, beans, and fat meat, etc., and by the time they have served a term of from five to ten or twenty years, what can they be but wrecks physically, morally and mentally for the work they do does not digest their food. Take the same men and let them handle the pick and shovel out in the sunshine in God's purest air, feeding them the food of a laboring man, then when they have served a period of from five to ten or twenty years, they come out pictures of health, physically, morally, and mentally, and are not dependent upon the communities in which they live on account of poor health but are able to earn an honest living. Where else could the state work a convict where he would be worth more to the state and society in general than on the public roads; where else could it work them that they would be working for the free laboring man instead of working as his competitor. It is not right nor just to lease them out to large corporations to kill them for profit to the corporation. Why should a corporation be allowed to work to death a bought and paid for piece of flesh in order to add large profits to its business. From a humanitarian standpoint the working of the convicts on roads is the greatest blessing that ever befell the poor unfortunate. Good, honest work is a good wholesome tonic, a moral stimulant, and may just as well be turned into an asset in the case of convicts as not. Many of the crimes that lead to penitentiary imprisonment may justly be laid at the door of society and the state, and why then should not the state do something to set these poor victims of wrong conditions at a wholesome, useful work that will regenerate them and restore them to society. How many of us could pass through what the so-called criminals have to and not do the same things they did or even worse? Why brand these unfortunates with disgrace, afflict them with disease, unfit them for useful labor by enforced idleness in confinement. There is a better way to handle them. It is to put them on roads for their good and for the good of the state at large.

About eighteen states have done this to their great advantage. Why not Kentucky fall in line and do something worth while in the way of State aid for better roads.

INJURY TO INTESTINE FOLLOWED BY A VOLVULUS.*

By CHARLES A. VANCE, Lexington.

I saw this case for the first time at 7 P. M., July 19, 1912. He had been kicked in the abdomen by a horse at 4 P. M., on the same day. For two days previously he had been eating green apples and had had the stomach ache for about six hours before he was kicked. He was a well grown boy, fifteen years old at the time of the accident.

At seven o'clock his temperature was 98.6, pulse was 74, and respiration was 20. His abdomen was somewhat rigid and tender all over and slightly distended with gas. Liver dullness was normal and he had abdominal breathing. He was suffering with cramplike pains about the same as he had before the horse kicked him. He vomited a large quantity of chewed-up green apples just before I saw him. I was satisfied that he had some intestinal injury, in addition to the green apples, and advised exploring his abdomen at once, but this was refused by his mother, who thought that his troubles were caused only by the green apples, and as I was not absolutely sure, I did not insist very strongly. I gave him two low enemas and nothing by mouth and he had a fairly comfortable night.

The next morning when I saw him his temperature was 100, pulse 100, respiration 24. His abdomen was rigid and very much distended with gas and tender all over, liver dullness was diminished and he had chest breathing. I advised operation at once and moved him to the hospital.

Before operation his leucocytes were 18,000 and the polynuclears were 80 per cent. I operated on him at one o'clock, just twenty-one hours after the injury.

On opening the peritoneum, a good deal of fluid and green apples escaped. I found a rupture of the ileum about the size of the end of my little finger; from this hole green apples and intestinal contents were pouring out. This was closed with a purse string and reinforcing Lambert sutures. The abdominal cavity was filled with normal salt solution. I closed the incision in the usual way, leaving in three rubber tube drains.

After the operation, he reacted fairly well and seemed alright until the third day, when his abdomen became distended and he vomited several times. He had several enemas and ten grains of calomel, followed by two ounces of magnesium sulphate with very little result. Then I gave him four minims of croton oil, followed by a bottle of citrate of magnesia, which he retained, and he had eight large

*Read before the Fayette County Medical Society.

watery stools, after which he was very comfortable and had very little gas. The wound was infected and opened up the full length and was granulating satisfactorily from the bottom.

He seemed to be doing very well, bowels moving every day and I thought he was on the road to recovery, when on August 17, 1912, after eating supper, he vomited and began to suffer with cramp-like pains in his abdomen. Abdomen was soft, with very little gas and there was no tenderness anywhere. The liver dulness was normal and there was abdominal breathing. I gave him ten grain of calomel, which was followed by one ounce of magnesium sulphate and his bowel moved four times, but this did not give him any relief from his pain, which kept up with cramp-like waves. He passed no more gas after the four movements. When he had the pains, one could see the coils of intestine move around under the abdominal wall. Leucocytes were 12,000, polynuclears 75 per cent., temperature 99, pulse 100, and respiration 20.

The diagnosis of intestinal obstruction was made and I operated on him at three o'clock August 18, 1912, about twenty hours after he first had the pain in the abdomen. I separated the old wound with my finger and found the intestine, which had been perforated, adherent to the peritoneum and tore it as I opened the cavity. Everything was soiled with intestinal contents. I sutured the tear and broke up a lot of adhesions and found a volvulus of the ileum, eighteen inches long, through a hole in the mesentery. This tear in the mesentery was within a foot of the old rupture of the ileum. I did not find it at the first operation and do not know whether it was there at that time or not. A part of the intestine was black. I released and untwisted the intestine and poured hot water over it until the color became better. I left in the cavity four ounces of sterile olive oil and some normal salt solution and closed the wound without drainage.

The next day he had five grains of calomel, which was followed by one ounce of magnesium sulphate, but his bowel did not move. However he passed a little gas with an enema. On the second day he vomited a brownish colored fluid several times. I then gave him four minims of croton oil and repeated it in three hours, after which his bowels moved many times.

The wound was infected at the lower angle, but the fascia held and it healed promptly and he had a good strong abdominal wall when he left the hospital, September 27, 1912.

He has grown a good deal since and has done hard work all the time, raising three crops of tobacco.

NEWS ITEMS AND COMMENTS

Dr. Jas. A. McKee spoke on "Organization" at Labor Hall in Lexington January 13.

Dr. F. P. Thomas has gone to New York to take a month's post-graduate course in medicine.

Dr. B. M. Taylor filled his position as State Senator from his district in the State Senate at Frankfort.

Dr. T. L. Bailey, who has been in New York for the past ten days taking a special course, has returned home.

Dr. A. C. Foster, who has been attending clinic instructions under Dr. Murphy at Chicago, returned to Owensboro.

Dr. W. Moss Gibson of Richmond, left a few days since for San Antonio, Texas, to visit his brother, Dr. Hugh Gibson, who has been sojourning in that city for several months.

Dr. W. R. Thompson delivered an address to the students of the Winchester High School. His subject was "Tuberculosis and Its Treatment." Dr. Thompson was invited by the Mothers' Club of that city to deliver the lecture. Being a specialist on this dreaded disease, his lecture was instructive and interesting.

Dr. R. F. Robinson, second assistant physician at the Western State Hospital since 1908, has tendered his resignation to take effect March 1, and will enter upon the practice of medicine at Madisonville, after a post graduate course in Chicago. Dr. Robinson has been a very popular official and his resignation was a surprise.

The Clark County Medical Society met at the office of Dr. Howard Lyon. Mr. J. W. Crone, the architect, who was recently given the contract for furnishing plans to build the new city hospital, was present to show his finished plans to the physicians. The question of municipal ownership of the waterworks plant was considered. Ophthalmia neonatorum was the medical topic for the meeting and was discussed both from a medical and a legal point of view. Dr. G. F. Doyle, Dr. J. E. Baucum and Dr. O. R. Venable led the discussion.

The Oldham County Medical Society met on Thursday, March 9, at 1 o'clock, at the Park Hotel, LaGrange. The program was as follows:

C. L. Hancock read a paper on "Early Diagnosis of Pulmonary Tuberculosis."

J. E. L. Harbold read a paper on "Home Care and Treatment of Tuberculosis."

C. N. Goldsborough read a paper on "Benefits of a County Anti-Tuberculosis Association."

Discussion was led by J. A. Freeman.

E. D. BURNETT, Secretary.

Dr. H. P. Sights, who for the past six years has been superintendent of the Western State Hospital for the Insane at Hopkinsville, and under whom that institution has made many advancements tending to better care and kinder treatment of the patients, has announced positively that he will not be a candidate for re-appointment by the State Board of Control when his term expires on July 1. Dr. Sights came here from Paducah, and he has been thoroughly efficient. There will of course be no dearth of candidates for the position. One who is already announced and who is being strongly endorsed is Dr. Earl Weathers, of Elkton. He is a Democrat, a son of former Mayor Weathers and a brother of Editor George S. Weathers, of the Elkton Times. His selection would be a very popular one in Western Kentucky.

Dr. H. G. Sanders, of Campbellsville, the present first assistant physician; Dr. Vernon Blythe, of Paducah, and others are avowed candidates.

Dr. S. H. Williams, of Crofton, an applicant for one of the positions of assistant physician, also to be filled from time to time.

"Baby Week" in Jackson was given a good start when a number of ministers preached on appropriate topics. The ladies' societies in nearly every church had special meetings. Throughout the week there were special features with the "Better Babies" contest at the Southern hotel as the headliner.

Dr. J. A. Blackmon talked at the "Baby Week" headquarters in the Cantrell building on "Congenital Diseases."

Dr. Herman Hawkins talked on "Infant Feeding." At 3:30 o'clock Dr. A. B. Dancy talked on "Prevention of Blindness."

Dr. P. B. Lusk made a talk on "Prenatal Care." At the big mass meeting at the Marlowe theater, Dr. Jere L. Crook lectured on infant health and the prize winners in the baby contest were announced.

At the Cantrell building Dr. G. L. Williamson talked on "Childhood Diseases."

A splendid program was prepared for a special "Baby Week" entertainment at the College street school building.

The Trigg County Medical Society held an interesting meeting in the office of Drs. Blane and Hopson in Cadiz.

Dr. J. H. Morris read a paper on "Grip And Its Treatment," and some radical reforms were advocated by Dr. J. W. Crenshaw in a paper on "Contagion and How To Combat It." Instead

of the present method of preventing the spread of small-pox by quarantine, he advocated "segregating, fumigating and vaccinating." In the Jenner vaccination, he contended that we have a certain preventive, and if every doctor would vaccinate every child born with the same degree of fidelity that he ties the placental cord, small-pox would soon be an unknown disease in "polite society."

In treating typhoid fever he contended for universal use of the typhoid vaccine. If as faithfully carried out in civil as in military life, he believed that typhoid fever could be completely stamped out.

In scarlet fever he thought that progress was being made along bacterial lines, and that until this is effected, the best that could be done was to segregate and quarantine. The bacterin treatment was in the experimental stage with good prospects of success.

In whooping cough he thought it wise to give the pertussis serum now on the market a faithful trial, as the reports given were very encouraging. He expressed supreme confidence in the anti-toxin for diphtheria, both in immunizing doses and as curative of the disease. Nothing, he said, is more certain established in medicine than the beneficial effects of diphtheritic anti-toxin. He advocated early use and in large doses.

For tuberculosis he stated that the open air treatment advocated and developed by the "Saranac Lake Invalid," Edward Livingston Trudeau, was still in the ascendancy, and that the bacterin was rapidly gaining in favor and would probably triumph until tuberculosis would no longer be held as "the captain of the mighty host of death." He stated that he believed much now regarded as Utopian would in the near future become an existing reality.

Dr. G. E. Hatcher, of Cernlean, was elected president; Dr. J. H. Morris, vice-president, and Dr. J. Lacy Hopson, secretary and treasurer.

The regular monthly meetings were fixed for the last Wednesday in each month. The next meeting will be held on the 29th of March, and the subject for discussion will be "Appendicitis," and the different phases of the subject will be assigned to members by Dr. Hatcher, the president.

Motility Test for Differentiating Typhoid Bacilli in Water.—The Journal A. M. A., described September 4, 1915, p. 908, the U tube, with sand in one side, through which motile bacteria readily make their way. The nonmotile stay in the sandless side in which they were all placed originally, while the motile typhoid bacilli make their way through the sand and proliferate above it.

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NEXT MEETING STATE ASSOCIATION.
HOPKINSVILLE, 1916

COUNTY SOCIETY REPORTS

Breathitt—Persuant to a call by O. K. Swango, President, the Breathitt County Medical Society held a meeting to reorgauize and elect new officers for 1916. Earl Mooreman resigned as Vice President and the office of Secretary was declared vacant, whereupon the following officers were elected:

O. H. Swango, President; R. I. Kerr, Vice President; Earl Moorman, Secretary and Treasurer.

EARL MOORMAN, Secretary.

Christian—The Christian County Medical Society met in regular session February 15, 1916, at the Avalon, Hopkinsville. The following physicians were present: Drs. Stephens, Reynolds, Barnes, Sandbach, Stites, Rozzell, Beazley, Rice, Bell, Southall, Wright, Lacey, Keith, Harned, Sargent.

Several interesting case reports were made.

F. M. Stites read a most interesting paper on "Alcohol."

This splendid paper was thoroughly discussed by all present.

J. W. HARNED, Secretary.

Carlisle—The following notification was mailed to every doctor in the county: The Carlisle County Medical Society will meet in Arlington, March 7th, (First Tuesday) at 10 o'clock A. M. and your presence and earnest co-operation is urgently requested to make this meeting both a scientific and social success. Without you there will be "something lacking."

Program

Divine invocation.

Report of Committee on Arrangements.

Report of other committees.

Symposium on Influenza.

H. T. Hocker: "Etiology and Pathology."

J. L. Dunn: "Symptomatology and Diagnosis."

T. J. Marshall: "Complications and Sequella."

W. Z. Jackson: "Treatment."

Adjourn at any convenient hour for dinner.

Afternoon Session—Miscellaneous Business.

Appointment of Committees.

Adjournment.

Come and bring another doctor.

Yours fraternally,

WM. L. MOSBY, Secretary.

On March the 7th, the Carlisle County Medical Society met in Dr. Jackson's office at 10:30 A. M. and in the absence of the President, Dr. Hocker was elected chairman pro tem.

Divine invocation by Rev. Taylor.

Address of Welcome by Rev. Rouse, beautifully eulogizing the noble calling of the time-honored medical profession and emphasizing the co-relation of ministry to medicine, he told us

that Christ was the greatest physician and that the Lord himself performed the first surgical operation when He caused Adam to fall into a deep sleep and He took from his side a rib and made woman, not unlike modern anesthesia. He said woman was born of man when under the peaceful influence of a deep sleep, but man was born of woman during the hour of an agonizing, vigilant wake.

Each paper was read as appears on the above program.

H. T. Hocker gave the history of "Influenza," mode of spread and effects of the various epidemics visiting this country, especially that of 1889-90, and the seven years following and that of 1915 now epidemic. He gave us the etiology and pathology as usually present.

J. L. Dunn gave us a pictorial review of the clinical symptomatology, sudden onset, fever for 24-48 hours, respiratory form, gastro-intestinal, nervous and febrile with a brief differential history of meningitis, pneumonitis and the various infectious diseases with which it may be confused.

T. J. Marshall, reviewed the present pandemic especially with reference to complications and sequellae. He spoke of its insidious, deceptive character and peculiar debilitating tendency, inviting or predisposing to bronchitis, bronchopneumonia, lobar pneumonia, pleurisy, abscess of lung, gangrene and of the intestinal form, jaundice, diarrheas, etc. He told us tuberculosis was the most frequent and important sequella.

W. Z. Jackson gave prophylaxis as the sine qua non in the management of influenza, disinfection of naso-pharynx, isolation, rest in bed. Coryza, tincture belladonna and opiates, sinus involvement steam and adrenaline solution for spray. Bronchitis ammonium, ipecac, etc. Pain, strontium salicylate, aconite, hot baths, etc. He advised a careful watching of patient's heart and long period for convalescence.

After dinner at the Hotel Victor, a feast much enjoyed, the society took up the discussion of the symposium presented by the essayists and as Dr. Poole came in late, W. L. Mosby was requested to open the discussion, after which all present, Drs. Hocker, Dunn, Marshall, Jackson and Poole remarked.

It was decided to have a call meeting in April with time and place left to the President, Vice President and Secretary, to call and arrange same.

The society then adjourned.

WM. L. MOSBY, Secretary.

Crittenden—The Crittenden County Medical Society met in the office of T. Atchison Frazer, Marion, Ky., at 1 P. M., February 29, 1916. The meeting was called as a joint meeting of the County Medical Society and the Health Officer's School of Instruction.

The following physicians were present: Frazer, Perry, Driskill, Newcom, Clement, Cook, Moreland, and Fox. One midwife was present and also Miss Emma H. Hunt a graduate nurse representing the Kentucky State Tuberculosis Commission.

T. A. Frazer, Health Officer, made a very forceful talk on the law regarding the prevention, reporting, and treatment of ophthalmia neonatorum and trachoma, and also urged a more careful filling out of Vital Statistics reports so that they will not only comply with the law but have more scientific value.

Miss Emma Hunt gave a very interesting and instructive talk on trachoma, and tuberculosis, and the need of a visiting nurse in this county.

As we had failed to meet this year until this time the following officers were elected for the year: C. G. Moreland, President; E. E. Newcom, Vice President; T. Atchison Frazer, Delegate, and J. Ernest Fox was re-elected Secretary-Treasurer.

Adjourned to meet again March 13th, 1916.

J. ERNEST FOX, Secretary.

Fulton—The Fulton County Medical Society met Fulton, Wednesday, February 15, 1916. The society will meet in Fulton every second Wednesday in each month. We appointed J. B. Paschall President; Lon Naylor, Vice President; S. Cohn, Secretary and Treasurer; H. Luten, Delegate; J. B. Paschall, Alternate.

Several interesting papers were read and a number of cases reported.

S. COHN, Secretary.

Greenup—The Greenup County Medical Society met at Russell, February 3rd, 1916, and was called to order at the home of Dr. E. R. Fitch with the following members present, Morris, Brady, Fitch, Franz, and Vidt.

Minutes of the last meeting read and approved.

S. C. Smith presented his application for membership. Motioned by Dr. Brady to accept, seconded by Dr. Fitch.

Motion made to increase the county dues to one dollar a year. Motion made by Dr. Fitch and seconded by Dr. Brady.

A. S. Brady read a paper on "Acute Articular Rheumatism in Children." Discussion opened by S. C. Smith, followed by Morris and Brady.

J. I. Rathburn not being present failed to read a paper on "Influenza."

C. E. Vidt was called upon by Dr. Morris to give a talk on "Influenza," to which he responded. Discussion opened by Dr. Morris, followed by Drs. Brady, Smith, Fitch, and in closing, by Dr. Vidt.

Motion to adjourn.

Next meeting in Greenup.

C. E. VIDT, Secretary.

Greenup—The Greenup County Medical Society met at Fullerton, January 6th, 1916, and was called to order by the President, H. T. Morrim. Members present, H. T. Morris, Bryson, Meadows, Hunt, Vidt, and Fitch, Rardin and Robe from Portsmouth, Ohio.

H. T. Morris read a paper on "Lobar Pneumonia," reciting also a case report. Discussed by Rardin, Fitch, Robe, Bryson, Vidt, Meadows and in closing by Dr. Morris.

C. E. Vidt read a paper on "Brain and Skull Injuries From a Surgical Standpoint." The paper brought out an active discussion by all present.

J. A. Franz who did not attend the meeting failed to read a paper on "Broncho-Pneumonia."

M. W. Meadows, of Fullerton, extended to all of the members of the Greenup County Medical Society an invitation to a 6 o'clock dinner. The fact that very few out of town members were present and the home physicians being busy at the time, Drs. H. T. Morris and C. E. Vidt were the only ones to attend. The variety of edibles, and these fit for a king, their preparation and serving, was a credit to the doctor's wife. This act of hospitality certainly calls for thankfulness by all.

Motion to adjourn.

Next meeting at Russell.

C. E. VIDT, Secretary.

Harrison—The Harrison County Medical Society met at the Court House, February 7, 1916. Vice President J. E. Wells, called the meeting to order. Members present, Drs. Martin, Rees, N. W. Moore, Wells, Beckett, Wood, Best, Swinford, McDowell, W. B. Moore.

R. W. Wood reported a case of "Cancer of the Rectum. Patient had been treated for hemorrhoids.

J. M. Rees reported a case of "Cystic Goitre," a few days after the gland was removed patient felt numbness in right hand, no swelling but complete loss of pulse in right arm. Believes condition due to clot in brachial artery.

J. E. Wells read a paper on "Complications of Influenza."

J. M. Rees discussed "Osteomyelitis," the essayist on this subject being absent. Discussion entered into by Drs. Martin, N. W. Moore, Beckett, Wood, W. B. Moore, McDowell and closed by Wells.

The Chair appointed Drs. Josephus Martin, McDowell and W. B. Moore as delegates to the Tuberculosis Conference at Frankfort, February 15.

Society then adjourned to meet at the Court House, March 6. This will be our permanent meeting place in the future, owing to crowded condition at the hospital, this change became necessary.

W. B. MOORE, Secretary.

Hardin—The Hardin County Medical Society met at the City Hall, Elizabethtown, February 10th, with the following members present, Drs. J. C. Mobley, J. W. O'Connor, J. V. Pruitt, T. E. Craig, F. P. Strickler, C. W. Rogers, J. M. English, M. S. Allen, W. F. Alvey.

Outside of the regular order of business the Harrison law was discussed and a better understanding of this law was had by the members. The all-time health officer proposition was also discussed, not all the members present being in favor of this.

A motion was made and carried that the society as a body would oppose any public office-seeker that was not in favor of the best interests of the medical profession.

Many interesting cases were reported and discussed by members of the society, after which the meeting adjourned.

W. F. ALVEY, Secretary.

Lewis—The Lewis County Medical Society, by the kind assistance of A. S. Brady, Councilor for the Ninth district, was reorganized February 21st, and the following officers were elected:

L. A. Grimes, President; T. B. Ginn, Vice President; H. M. Bertram, Secretary and Treasurer; J. C. Graham, C. L. Graham and A. C. Henthorn as Board of Censors; J. D. Liles, County Referee, and E. M. Foreman as Delegate to State Meeting.

This society has not been active for the past four years, but from the success of this meeting it looks like there is a brighter prospect for the society to hold together than ever before. The next meeting will be at Vanceburg, March 20th, and by that time we hope to have every practicing physician in the county as a member.

HERBERT M. BERTRAM, Secretary.

Pulaski—The Pulaski County Medical Society held its regular monthly meeting at the office of Dr. S. F. Parker on Thursday, February 10, 1916.

In attendance were Drs. W. M. Price, A. W. Cain, Green Cain, S. F. Parker and Carl Norfleet.

After reading and adoption of the minutes of the last meeting the society proceeded to business.

CLINICAL CASES

W. M. Price reported a case of a woman, seven months pregnant, mother of nine children in eleven years, all normal deliveries, except this, history of uterine hemorrhage for past four months, examination revealed placenta previa centralis, consultation, uterus emptied, on sixth day chills, fever, tympanities, and lymphangitis began. Antistreptococci serum administered with noticeable effect at this time.

General discussion.

A. W. Cain reported a case of a boy, 21 years of age, colored, frost-bite, feet, fingers, and nose

Gangrene, no fever chill or pain. Operation on 22nd day. Feet removed above ankle.

PAPERS.

Carl Norfleet read a paper on "Anemia, Its Significance."

General discussion.

BUSINESS.

The Secretary was instructed to write Senator B. C. Lewis and Representative R. C. Tartar at Frankfort, asking their hearty support and vote for Senate Bill No. 5 and House Bill No. 230, respectively.

The Secretary was instructed to sign the names of the entire membership of the society to the petition.

As per instructions given at last meeting, the secretary called upon the doctors of Somerset and secured a statement from them regarding contract practice for lodges, which was decidedly negative.

Later it was learned that one doctor after having suggested this canvass by the secretary, has accepted a contract with a lodge in Somerset.

As a result of this act the secretary was instructed to write to this doctor and ask that he appear before the society at its next meeting and state why he accepted a contract with a lodge.

There being no further business the society adjourned.

CARL NORFLEET, Secretary.

Pendleton—The Pendleton County Medical Society met at Butler, on February 9, 1916, with the following members present, Drs. Blackerby, Blades, Brown, Clark, Daugherty, Eckler, Kendall, McKenney, Nichols, John T. Wilson, J. Ed Wilson, Woolery, J. E. Wells, Cynthia; and J. A. Caldwell of Newport visiting.

The meeting was called to order by retiring president J. F. Daugherty, and after a few brief remarks turned the presidency over to John E. Wilson, president-elect, who read his address to the society.

After this we proceeded to business, and as we had sustained a loss to our society in the death of Dr. W. H. Yelton, one of our most worthy members, every member of the society expressed their sympathy in his death, and resolutions of respect will be forwarded to the Journal at our next meeting. I also send a letter from the family to the society that the society requests to be printed in the Journal, which is as follows:

Butler, Ky., Feb. 1st, 1916.

Pendleton County Medical Society,

Gentlemen:

We take this opportunity to express our appreciation to the members of your society for their kindness during the last illness of our husband and father, Dr. W. H. Yelton.

We have every assurance that your kindly ministrations were prompted by the high regard

in which you held our departed loved one, and it is our desire to show you the high esteem that he had for your society and its members.

On numerous occasions he spoke of the society lauding its aims and purposes, regretting his inability to attend its meetings.

While sickness kept him away in person, yet he was always with you in spirit.

He understood and appreciated the benefits to be derived from association with the physicians of the county. During his last illness he desired that a letter, to this effect, be written.

We hope it will in some measure express the sentiments which were so deeply implanted in his mind.

Again thanking you for all and especially for the beautiful floral offering, we are,

Sincerely, your friends,

MRS. W. H. YELTON AND FAMILY.

We had one of the best meetings of the society for sometime, and it looks as though we are to have a very profitable year.

W. A. McKENNEY, Secretary.

Pulaski—The Pulaski County Medical Society held its regular monthly meeting at the office of S. F. Parker, on Thursday, January 13, 1916.

In attendance were Drs. A. J. Wahle, J. A. Polin, Green Cain, A. W. Cain, G. E. Jasper, S. F. Parker, Wm. Price and Carl Norfleet.

Reading of minutes was deferred.

A. W. Cain reported a case in a boy, aged 5, anaemic, enormously swollen jaw, general breakdown of buccal tissue, small amount of pus, destruction of teeth.

Treatment.—Stab wound for drainage, general oral antiseptics. Diagnosis, malignancy.

General discussion.

Carl Norfleet reported the following case: Young man, 23, lost arm in shredder, amputated at middle third of humerus. One month later osteomyelitis developed, general sepsis followed, patient died in two weeks.

No papers having been prepared the business of the evening was then taken up.

The Secretary was instructed to write all doctors not present and secure an agreement that they will use a 1 per cent solution of silver nitrate in the eyes of all new-born babies, immediately after birth as advised by State Board of Health.

The Secretary was instructed to call on the doctors of Somerset, not present at this meeting and learn their attitude toward contract practice of lodges.

The society will meet every second Thursday in each month and the following program has been arranged:

February—(1) "Meningitis, Epidemic." A. J. Wahle; (2) Anemia; Its Significance, C. Norfleet.

March—(1) Diphtheria; Treatment in Gen-

eral Practice, J. A. Bolin; (2) Diabetes Mellitus, S. F. Parker.

April—(1) Sequellae of La Grippe, Green Cain; (2) How We Should Study Cases, W. M. Price.

May—(1) Points Practical in Practice, A. W. Cain; (2) Infant Feeding, T. M. Garner.

June—(1) Enteritis in Children, Brent Weddle; (2) Organic Disease of Heart, M. Warren.

July—(1) Nephritis, L. Hughes; (2) Organic Disease of Heart, M. Warren.

July—(1) Nephritis, L. Hughes; (2) Complicated Obstetrics, J. A. Baute.

August—(1) Materia Medica, V. G. Trimble; (2) Vaccine in Typhoid, A. J. Wahle.

September—(1) Disease of Gall-bladder, A. W. Cain; (2) Abscess of Liver, G. E. Jasper.

October—(1) Inspection of Schools, C. Norfleet; (2) Care of Lying-in-women, G. W. Isaacs.

November—(1) Treatment of Fractures, S. F. Parker; (2) Scarlet Fever, N. D. Stigall.

December—Election of Officers.

CARL NORFLEET, Secretary.

Pulaski—The Pulaski County Medical Society held its regular monthly meeting at Dr. S. F. Parker's office, on Thursday, December 9th, 1915.

In attendance were Drs. Wm. Price, J. A. Bolin, J. A. Baute, G. W. Isaacs, J. M. Owens, A. W. Cain, Green Cain, and Carl Norfleet.

Visitors from the McCreary County Medical Society were, Drs. W. R. Cundiff, R. C. Sievers, J. E. Harmon, Walter Fitzpatrick and C. E. Cain.

S. F. Parker being out of town, minutes of last meeting were deferred.

A number of interesting cases were reported and discussed in general.

This being the time for regular election of officers no papers were read.

Green Cain, of Big Spring, Texas, made application for membership in the Pulaski County and State Medical Association; his petition was referred to the Board of Censors.

The election of officers for the year 1916 resulted as follows:

A. J. Wahle, President; J. A. Bolin, Vice President; Carl Norfleet, Secretary and Treasurer; J. A. Baute, Censor; Carl Norfleet Delegate; Program Committee, A. W. Cain, S. F. Parker, Carl Norfleet.

This completed the program for the day. The society adjourned and accepted the cordial invitation of A. W. Cain for dinner at his splendid and commodious residence on Columbia street. There we were met with that hospitality typical of the Kentucky housewife. Mrs. Cain seated us to a sumptuous repast until each became alarmed at the other fellows' capacity. After dinner a smoker and social exchange were enjoyed. All went away feeling in accord with those principles which make professional life

worth while, harmony, friendship and brotherly love.

CARL NORFLEET, Secretary.

Pendleton—The Pendleton County Medical Society met at Butler, Ky., on Wednesday, March 8, 1916, with the following members present: Drs. Beckett, Blackerby, Blades, Brown, Chipman, Daugherty, Eckler, Hopkins, McKenney, John E. Wilson, J. Hadley Caldwell, of Cincinnati, O., visiting. The meeting was called to order by President Wilson. After roll call and reading of the journal, we proceeded to the business of the day.

We had a first rate report of clinical cases. One a series of three cases of syncope following right along in one man's practice. This coincidence brought out several reminiscences in the experience of our physicians.

Another the type of pneumonia that has prevailed this winter, and some of the atypical cases and complications, were discussed freely.

The following papers were read:

L. T. Eckler read a paper on "Urinalysis in Life Insurance." Discussed by J. M. Blades.

J. H. Caldwell read a paper on "Acute Septic Peritonitis, With Report of Case," which was well received. The doctor is one of the best young surgeons of Cincinnati, and will make his mark in the surgical world. We are always glad to have him with us.

This closed the business of the day and we all left the meeting feeling that we had been well paid.

W. A. McKENNEY, Secretary.

Shelby—The Shelby County Medical Society held its regular monthly meeting the third Thursday in January, 1916, at A. Hollenback's with the following members present: Drs. Perrin, S. L. Beard, Austin, F. M. Beard, Ray, E. B. Smith, Hughes and Allen. The president and vice president both being absent, the society was called to order by the secretary.

Curtis Austin read a well prepared paper on "Tonsillitis," which was discussed by all the members present. This paper was a very practical one and it, together with the discussion will prove of great benefit to the society as they had to do with a subject of almost everyday occurrence in the practice of the members.

Heretofore it has been the custom of the members to entertain the society in alphabetical order but as the attendance varied so much it was decided to add enough to the dues to cover the cost of the lunches for the year, a motion to this effect was accordingly made and seconded and passed unanimously.

By this ruling the dues will now be nine (\$9.00) dollars, five (\$5.00) dollars of which will be used for the entertainment feature. The following paid the nine dollars dues, Drs. Ray, Adams, Duff,

Nash, Bland, Lawrence. Austin, S. L. Beard, Perrin, E. B. Smith, Hughes and Allen.

The attendance at the December meeting being so small it was decided to hold the election of officers at the January meeting which was accordingly done with the following result: President, Harmon Nash of Finchville; Vice President Joe Perrin of Simpsonville; Secretary and Treasurer, W. E. Allen Shelbyville, R. F. D. No. 3; Delegate to State Medical Association, S. L. Beard; Alternate to be selected later. There being no further business to come before the society an adjournment was ordered.

W. E. ALLEN, Secretary.

THE FORUM

TO THE EDITOR:

Dr. Ap Morgan Vance was a member of the Medico Chirurgical Society almost from its inception and as he always wore his life as it were upon his sleeve; we his fellow members were more intimate with his character than is often the case of men of his class. Because of this intimacy it is not merely a belief with us but a knowledge, that his vigorous and active career was singularly full of credit and free from reproach of any kind. We know how his supreme energy, his unswerving integrity, his courageous frankness, his unassuming self-confidence, his generous friendship, his lavish liberality in all public and professional dealings; we know how his devotion to his family and his open heartedness in all social relations, how his supreme professional attainments and his faithful unselfishness to the helpless, all these attributes in a superlative degree combined with the wisdom of his councils, in both professional and civic affairs, made him so rare a citizen of usefulness, lovable and worth, that it is but simple truth to say that his character left little to be desired.

H. HORACE GRANT,
S. G. DABNEY,
CHARLES G. LUCAS.

TO THE EDITOR:

Please allow me to call your attention, to an oversight, on the part of your printer, in my article, appearing in the March number of the JOURNAL.

If you will refer to the cuts furnished, you will notice that due credit was given Buerger, for the use of his most excellent drawings and in justice to Buerger, as well as myself, am sorry indeed that this error was made.

Trusting that you will honor me, by publishing this letter in the KENTUCKY MEDICAL JOURNAL, I am, with best wishes,

Cordially yours,

GEO. H. DAY.

BOOK REVIEWS

The Physician's Visiting List.—Published by P. Blakiston's Sons & Co., Philadelphia. Price \$1.25. This little memorandum is neatly bound with leather, compact and simple in arrangement, and is a book that every physician will appreciate.

Skin and Venereal Diseases—Volume IX of the Practical Medicine Series. Published by the Year Book Publishing Company, Chicago. Price \$1.35. This volume treats of Dermatoses, Gonorrhea, Diagnosis and Treatment of Syphilis, etc.

International Clinics—Volume IV. Twenty-Fifth Series, 1915. This book treats of Diagnosis and Treatment, Pediatrics, Neurology, Obstetrics, Gynecology and Surgery. It will be found of great value to the physician and well worth the price.

Colon Hygiene—By J. H. Kellogg. Published by The Good Health Publishing Company, Battle Creek, Michigan. This book contains 381 pages. It treats of normal bowel action, the physiology of the colon, cause of constipation and habits which gives rise to constipation, diet, etc. The reader's attention is especially called to the chapter on the bowel habits of civilized men, which contains a fund of original information.

Post-Mortem Examinations—By William S. Wadsworth, M. D. Published by W. B. Saunders Company, Philadelphia. Price; cloth, \$6.00; half morocco, \$7.50. The manner of presentation will be found to differ very largely from that employed in other works. Some of the material is new, much has been restated in a new way, and not a little will, of necessity, be a repetition of what has often been said before. This book contains 598 pages with 304 original illustrations.

The Medical Clinics of Chicago—Volume I, Number 3 (November, 1915). Published by W. B. Saunders Company, Philadelphia. Price per year; paper, \$8.00; cloth, \$12.00. Some of the chapters in this volume are Typhoid Fever, with full discussion regarding the treatment, Gout, Cholelithiasis, Chronic Interstitial Nephritis, Hysteria in Children, Enuresis, Acute Catarrhal Jaundice, Brain Tumor, and many other of equal value.

Obstetrics, Volume VII, of the Practical Medicine Series.—Published by the Year Book Publishing Company, 327 So. La Salle Street, Chicago, Illinois. Price \$1.35. These volumes are issued at about month intervals, covering the entire field of medicine and surgery, every volume being complete on the subject of which it treats for the year prior to its publication. Volume VII treats

of recent progress in obstetrics and is published primarily for the general practitioner.

Nervous and Mental Diseases—Volume X. of the Practical Medicine Series. Published by the Year Book Publishing Company, Chicago. Price \$1.35. This volume has interesting chapters on Symptomatology, the Neuroses, Syphilitic Diseases of the Nervous System, Diseases of the Brain and Spinal Cord. Under Mental Diseases it treats of Insanity and the War, Dementia Praecox, Manic-Depressive Insanity, etc.

General Medicine, Volume VI, of the Practical Medicine Series.—Published by the Year Book Publishing Company, 327 So. La Salle Street, Chicago, Illinois. Price \$1.50. This book contains interesting discussions on infectious diseases, diseases of the mouth and esophagus, diseases of the intestines, liver, colon, bladder and pancreas. The books of these series are of great value to the general practitioner.

Medical and Veterinary Entomology—By William B. Herms. The Macmillan Company, New York. \$4.00.

In view of the importance of, and increasing interest attached to, insects as the intermediate hosts or carriers of disease, this book is timely and valuable. Certain diseases are so intimately dependent upon insects for their transmission, that, as a preventive measure, sanitarians find it far easier to wage war against the carrier than against the active etiologic organism. The book is excellent in design, profuse in illustrations and covers the field thoroughly. Its language is simple and the methods suggested for the eradication of insect pests are practical. A layman as well as a trained sanitarian or physician can read the book with understanding and profit.

Sexual Impotence—By Victor G. Veeki, M. D., Consulting Genito-Urinary Surgeon to the Mt. Zion Hospital, San Francisco. Fifth Edition, enlarged. 12mo. of 405 pages. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$2.25 net.

The subject of sex is being worn almost revealingly threadbare in the lay press. But here is a volume that needs no apology for appearing again in a new edition. Possibly some day man will be free from the evils that are a result of a misconception of sexual facts. Dr. Veeki illuminates clearly and cleanly such facts as the general practitioner should know.

Bone-Graft Surgery—By Fred H. Albee, M. D., F. A. C. S., Professor of Orthopedic Surgery at the New York Post-Graduate Medical School and the University of Vermont. Octavo volume of 417 pages with 332 illustrations, 3 of them in colors. Philadelphia and London: W. B. Saun-

ders Company, 1915. Cloth \$6.00 net; Half Morocco \$7.50 net.

Dr. Albee's bone-graft methods, particularly his inlay bone-grafts, are revolutionizing bone surgery. In this new work you get for the first time all Dr. Albee's successful technic and its practical application in an ever-widening field of use. You get the fundamental principles underlying the use of bone-graft in surgery; Dr. Albee's electric motor operating outfit and technic of using it, some 85 pages and 74 illustrations of the bone-graft in treating Pott's disease and other lesions of the spine; over 100 pages and 100 illustrations on the inlay bone-graft in the operative treatment of fracture—Dr. Albee pointing out, and showing you by actual skiagrams, the decidedly better end-results obtained by his inlay methods as compared with wiring, plates, nails, and the use of other non-absorbable fixation materials.

You get grafting in fresh fractures, ununited fractures, wedge cross-sections, dorsal pegs, fixation pins, etc., etc. You get operative methods for remodeling the hip-joint; the inlay bone-graft for fixation of tuberculous knee-joints, infantile paralysis, osteo-arthritis (Charcot's Disease), the wedge graft for habitual dislocation of the patella; bone-graft in treatment of disease and deformities of foot and leg; miscellaneous uses of the bone-graft. There are 332 original illustrations, three of them in colors.

Differentiation of Gastric Ulcer and Cancer.—Zoeppritz has been applying in 462 cases of stomach trouble Gluzinski's method for determining whether the stomach shows oversecretion of gastric juice—which, he assumes, is the rule with gastric ulcer—or abnormally low secretion—which is the result of the mucous catarrh that seems constantly to accompany and precede cancer. The findings were not encouraging. Relative secretory insufficiency occurs frequently with cancer, but may be encountered also with all other kinds of stomach affections and even with merely abdominal trouble, and in the healthy stomach. When it occurs with cancer it is not an early sign, and the cancer may be far advanced without this sign being present. It was found positive in 20.6 per cent. of the ninety-two cases of gastric ulcer or its consequences, and hence the discovery of relative secretory insufficiency by no means excludes simple ulcer. In applying such tests it would be better to give two meals that are alike rather than the test breakfast and the test meal as by the Gluzinski method.

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EDITORIAL

OUR NEW LEGISLATION.

THE ADVERTISING, FEE-SPLITTING, PURE FOOD AND MALPRACTICE LAWS.

Because of their importance it is earnestly hoped that every member of the medical profession in Kentucky will not only read, but will make a careful study of the four important laws relating to health and medical affairs secured at the recently adjourned session of the General Assembly, and published in full in this issue of the JOURNAL, under the head of Official Announcements. It will be found that these new laws, when they go into operation in June, will come very near to the every day life of each member of the profession, as it is expected they will promote the interests of the profession and public as a whole, and it is suggested that this number of the JOURNAL be marked and filed away for future reference, and for frequent discussions with other members privately and in the county societies until all are familiar with the new order of things. Named in the order of their importance to both the doctors and people, as they impress us, the laws are:

I.—THE HONEST ADVERTISING LAW.

This law was prepared by the True-Ad League of the United States, is designed to accomplish exactly what is indicated in the title, was passed through both houses of the General Assembly without opposition and, if properly enforced, means a revolution in all advertising, including nostrums and other things in which he have a special interest as a profession. As will be seen by careful reading, under heavy penalties, it prohibits any attempt to exploit, mislead or defraud the people by false statements in any newspaper, circular or in any other way. It is a wise and far-reaching law and a sincere effort will be made to secure its enforcement.

II.—THE FEE-SPLITTING LAW.

The provisions of this law are self-explanatory and, if the sentiment in its favor proves

as strong with the profession and people as it was in the General Assembly, offenders against it may expect little sympathy when they get in the courts. The purpose of the law is to prevent the spread of an evil which only reached Kentucky in recent years by importation from the richer and more populous states to the North and East of us, which is as dangerous to the best interests of the sick, and of the public as a whole, as it is degrading and debauching to those members of the profession, whether surgeons and other specialists or family physicians, who abuse the confidence of sick people, or the friends who act for them, by receiving and dividing fees upon the basis of anything except the true interests of the patient, and with the full knowledge and consent himself or of the friends who act for him and pay the bills. Lack of training in medical economics and ethics in most medical colleges, covering these and other principles and methods lying at the very foundation of professional and business success, with the poverty and failure or partial failure in life incident thereto, has filled our ranks with men liable to yield to such a temptation as this disreputable practice offers, and criticism of the individual or the class of offenders should be tempered with sympathy, on account of the system of medical education, rapidly waning, which did not mould them for better things. It is the purpose of the organized profession to employ attorneys and inspectors to enforce these two laws, and an appeal is here made for the support of every true friend of sick humanity in doing so.

III.—THE NEW PURE FOOD LAW.

This comprehensive pure food code, almost model in its thoroughness, was prepared under the supervision of the National Pure Food Association and, after careful consideration, was passed without opposition in both houses. As will be seen upon careful study, it covers every phase of the sanitary production, handling and storing of food products of every kind, and for the first time full authority is given the State and local health authorities

in enforcing its provisions. We are advised that the enactment of this law puts Kentucky in the front rank in pure food legislation, and that a proper education of the people on the subject and the enforcement which such education would make possible would give every needful protection in this all-important interest of the people.

IV.—THE NEW MALPRACTICE LAW.

In all the past, except for malpractice against doctors, almost every kind of damage suits against either individuals or corporations were required to be brought within twelve months, but as against doctors, they could be brought at any time within five years. To show how this discrimination against our profession worked out in practice, a careful investigation of the court records shows that over three-fourths of all malpractice suits were brought after the expiration of one year and, while it may not be pertinent to mention it here, one may at least be excused for saying that a large majority of them were brought in the name of paupers by a class of lawyers generally recognized as not being in the front rank of their profession.

None of this legislation, or any of that of recent years, valuable alike to the physicians and people of Kentucky, could have been obtained without the active support and backing of what is believed to be one of the greatest and best organized professions in this country, but it may be of interest to our friends to know that all of the laws put upon the statute books within thirty-six years were placed there solely by appeals, in the name of humanity, to the highest and best that was in legislators, who, in spite of the abuse with which it has become the fashion to assail them, are nearly always, both in intelligence and integrity, far above the average of the constituency which elected them, and all of it in all these years was obtained without the contribution of a copper cent by the profession of the State, or any member thereof.

WHAT WE OWE TO DR. MILTON BOARD.

In spite of the fact that we were forced to withdraw the All-Time County Health Officers Bill, for reasons already made clear in a former issue of the JOURNAL, and of the political and factional divisions which so greatly interfered with the work of the General Assembly, more really progressive and effective legislation for the protection of health and life was secured at the recent session than in any one for many years. This was no doubt due in part to the educated public

sentiment which has been slowly and laboriously built up by the health workers, newspapers, women's clubs and similar agencies, particularly in the last decade, partly to the increased harmony and usefulness of the medical profession, but as one on the ground and in the midst of it all, I can give cheerful testimony to the fact that far more of the success was due to the active, tactful and untiring work of Dr. Board. Able and resourceful, he was strong with elements I could not approach, there was no hour of the day or night that he was not ready and willing to neglect his own exacting duties and stay in Frankfort as long as was necessary to protect and advance the interests of the profession, and of the people, in all these matters about which they are so dependent upon the profession. We owe him a debt of gratitude which will be difficult to pay, and which words of mine cannot express or make clear, and I ask the profession to remember it.

J. N. McCORMACK.

THE RESIGNATION OF PROFESSOR R. M. ALLEN.

The people of Kentucky have suffered a distinct loss in the resignation of Professor Allen, who secured the passage of our first pure food and drug law, and the various amendments since added to it, and who has been State Pure Food Commissioner from the time the law went into operation. The directors of the State Experiment Station refused to accept the resignation, granting him a leave of absence for one year instead. He has gone to New York to accept a position as Expert Adviser of one of the great concerns furnishing food supplies to European countries, and it is to be earnestly hoped that he can see his way clear to return to his native state, where he has done a great work, although still a young man, and where his worth is so fully appreciated.

Malaria.—Vincent remarks that the present campaign in the Balkans, Greece and Turkey is exposing the soldiers to danger of malaria, and he reviews the present status of knowledge as to the exact technic for warding it off and treating it. In the Mediterranean countries, malaria is apt to assume a continuous type, and for this he advocates one or two subcutaneous injections of quinin daily until defervescence. A saline purgative is given also and, when the fever has subsided, quinin is continued by the mouth for several days, on the alert to detect any relapse, as this type is peculiarly rebellious. Vincent recalls that he has established the efficacy of 3 or 4 gm. a day of calcium chlorid in warding off and treating hemoglobinuric bilious fever.

SCIENTIFIC EDITORIALS.

DANDRUFF AND FALLING OUT OF THE HAIR.

About ten years ago one of the writers of this editorial wrote an article on baldness, in which he attributed the cause of most cases to infections by microorganisms. His views in regard to the microbe origin of baldness have not only not been changed, since that article, but rather have been strengthened.

While a bald head may give a man a distinguished and dignified appearance, but few men desire to have a bald pate. The poor "bald pate" has not only been stung by mosquitoes, flies and frost, but he also has been the target of makers of fun from time immemorial. The great Shakespeare who seemingly was well posted in medical matters, was a therapeutic nihilist as to the prognosis of baldness. In his "Comedy of Errors," Act II, Scene 2, you find the following discourse:

Dro. S.—There's no time for a man to recover his hair that grows bald by nature.

Ant. S.—May he not do it by fine or recovery?

Dro. S.—Yes, to pay fine for a periwig, and recover the lost hair of another man.

In the same comedy we find the following dialogue:

Ant. S.—Why is time such a niggard of hair being as it is so plentiful an excrement?

Dro. S.—Because it is a blessing He bestows on beasts, and what He has seanted men in hair, He has given them in wit.

Ant. S.—Why, but there's many a man has more hair than wit?

Dro. S.—Not a man of those, but he has the wit to lose his hair.

As to the causes of baldness Shakespeare believed with the ancient writers, particularly those of Greece, who thought that study and learning were the cause of baldness. According to the historians, Esculapius and Hippocrates, two of the earliest registered physicians, were bald-pated individuals, and so were the famous Greek poets, Aristophanes and the noted Sculptor Phidias. Since baldness was considered an external sign of intellectuality, it might have become a fad had it not been for the tragic end of the great tragedian, Aeschylus, who, according to Leonard, came to his end in 456 B. C., by the blundering of an eagle which mistook the top of his bald head for a rock, and dropped upon it its prey, a turtle, in order to break its hard concealment, so that it could be eaten. It is needless to say what the result was to the man.

The Hebrews, always practical, went a little deeper and studied the cause of diseases of

the hair from a scientific point of view. They looked upon baldness as a scourge or parasitic disease. Isaiah intimated that baldness was to be elassed with the parasitic diseases; censuring the daughters of Zion for their iniquity, he said, that, instead of well set hair, baldness "was to come upon them and a scab upon the crown of their heads."—(Isaiah 3:16-24). Baldness in those days was sometimes indirectly fatal; at least Elisha's baldness was fatal to the children who mocked him with their "Go up, thou bald-head."

Many different opinions have been held as to the causation of baldness. Those who do not believe in the parasitic etiology of baldness in all cases often refer to Pincus. According to him, alopecia is due to two causes: heredity and parasites. Alopecia in many cases, says Pincus, is hereditary, it being not uncommon to meet with families in which the fathers and sons for many generations lose their hair early in life. He even adds this is due to a markedly stretched condition of the aponeurosis of the occipito-frontalis muscle which becomes hereditary in certain families. If this be the case, why, then, don't the daughters become bald-headed as their brothers do? Such a hereditary explanation is not borne out by facts.

Again alopecia has been and still is often considered to be due to general disease or poor health. Baldness as the result of bad health is purely due to a nutritive lack, the hair-bulbs being badly nourished, the shaft becomes loose and falls out. Neuroticism and nervous shocks are also liable to cause partial or even total loss of hair. However, we must grant that in most cases of baldness, the general health is good. Whether in church, or theatre, or other public places, look at the bald-headed sons of Adam, and you will usually find them well-fed, robust and a jolly lot of individuals. Certainly not more than the usual percentage of bad health occurs among them.

To our minds, Sabouraud's theory in regard to baldness is the most plausible one. He maintains that the essential factor in all cases of baldness is the micro-bacillus of seborrhea, which he demonstrated in 1897. Lassar and Bishop, several years ago, after experiments with animals, asserted that alopecia prematura (premature baldness) could be produced by infection.

While considerable difference of opinion exists yet as to what constitutes the seborrhoeic process and what relationship the seborrhea has to baldness, nearly all writers agree that dandruff is a fertile cause of loss of hair and the most potent cause of baldness. Before Sabouraud had brought forward his

strong evidence as to the microbic origin of seborrhea, Hebra and Kaposi always maintained that a chronic seborrhea (dandruff) was the primary condition and that alopecia or baldness occurred only secondarily. Prior to Sabouraud, Unna demonstrated in alopecia due to seborrhea a bottle shaped organism, which he called the "bottle-bacillus." In our experience over 90 per cent of baldness is due to a dermatitis seborrhoeicum in which the micro-bacillus of Sabouraud or the bottle bacillus of Unna can be found. Under the term of dermatitis seborrhoeicum (inflammatory process of the skin) we may include different phases, such as eczema seborrhoeicum, pityriasis capitis, alopecia pitorodes and seborrhea sicca, going on to a distinct seborrhoeic baldness. G. Elliott, of New York, was the first American dermatologist who worked along the line of Sabouraud and Unna. In his paper, read before the American Dermatological Association in 1892 and published in the *New York Medical Journal*, February, 1893, he pointed out that out of 234 cases of premature baldness 216, or 90 per cent., were due to purely local process of the scalp, and that all of the 216 cases presented the clinical appearance of eczema seborrhoeicum. He furthermore believes this to be an infectious inflammatory process. Jackson, in a clinical study of 300 cases, gives much the same figures as Elliott. He gave the percentage of parasiticism at 75.

Judging from the foregoing data we have concluded that most cases of baldness are of parasitic nature. Taking this in consideration, we can realize how dangerous a comb or brush might be when used only by a few members of the same family; then how much more dangerous when used on hundreds of customers of all sorts and classes as is done in the barber-shop or hair-dresser's establishment. To prove this, culture-tubes were inoculated with the debris from a barber's comb and brush and incubated, with the development of innumerable colonies of various forms of organisms such as are found in the scalp. Every dermatologist can tell you of cases of dermatitis seborrhoeicum that he has cured, only to have them relapse after a visit by the patient to the barber. We can understand it in a layman, since he is ignorant of such facts, but we would hardly forgive a physician who lets his barber mistreat his scalp with unscientific shampoos or vile smelling hair tonics.

With the multiplication of beauty shops in our cities and with the adoption of all kinds of combs, rats and switches (the last two articles the finest dirt and germ catchers), the women are becoming as bald as the men. In our 200 cases of premature falling out of the hair in women, 128 cases could be traced to

infection from wearing rats and switches. Twenty-eight of our female patients were persuaded to abandon the use of these abominable disease-producing rats and switches; the improvement in their cases was remarkably rapid. The others would not give up wearing rats (will a woman ever give up anything pertaining to fashion?), and their improvement was correspondingly slow.

In conclusion, we would like to add in regard to new theories in regard to baldness, such as the wearing of hard hats, insufficient exercise, lack of deep breathing, (which is supposed to cause baldness by the production of poisonous air in the lungs) all such theories are simply a comfort to those who explode them. Though there is no doubt that the majority of cases of baldness are due primarily to infection, yet the general health must not be neglected, as a person with bad health, or "run down" system (as it is often expressed,) is more predisposed to infection than a healthy person.

What is the local treatment for such conditions? The majority of formulas advocated in the text-books are absolutely useless. While systematic cleansing of the scalp with alkaline solutions are of some benefit, and the faradic and high frequency currents are certainly helpful to many, no remedy has been found as useful and effectual by the writers as the ultra-violet rays derived from a well-made quartz-lamp. We regard Nagelschmidt's method of treatment by his quartz-lamp the best. Used cautiously and intelligently brilliant results can be obtained in treating dandruff and falling out of the hair.

M. L. RAVITCH AND S. A. STEINBERG.

Acute Heart Block.—The young man was healthy and had never had scarlet fever, diphtheria or acute articular rheumatism and was not guilty of excesses of any kind. He complained of headache for two weeks, then had a sore throat and pains in the feet but no fever. As he was about to mount his bicycle he grew suddenly dizzy and fell, and the dizziness returned the next day or so, with oppression in the heart region. Examination revealed total heart block. Laursen thinks that some otherwise latent rheumatism infection was responsible for this complete dissociation of conduction between auricle and ventricle. The subsidence of the heart block under treatment as for acute rheumatism confirmed this assumption of an indolent rheumatic infection localizing in the heart.

OFFICIAL ANNOUNCEMENTS

NO MALPRACTICE SUITS AFTER ONE YEAR.

Be it enacted by the General Assembly of the Commonwealth of Kentucky:

That Section 2516 of the Kentucky Statutes be amended by adding thereto the following words:

"An action for an injury to the person of the plaintiff, or of his wife, child, ward, apprentice or servant, or for injuries to persons, caused by the negligence or malpractice of any physician or surgeon, shall be commenced within one year next after the cause of action accrued, and not thereafter."

So that said section as amended shall read as follows:

"An action for an injury to the person of the plaintiff, or of his wife, child, ward, apprentice or servant, or for injuries to persons, cattle or stock, by railroads, or by any company or corporation; an action for malicious prosecution, conspiracy, arrest, seduction, criminal conversation or breach of promise of marriage; an action for libel or slander; an action against any physician or surgeon for negligence or malpractice; an action for the escape of a prisoner, arrested or imprisoned on civil process, shall be commenced within one year next after the cause of action accrued, and not thereafter."

SEVERE PENALTIES FOR FEE-SPLITTING.

Be it enacted by the General Assembly of the Commonwealth of Kentucky:

1. That hereafter any physician, surgeon, or other person who carries, sends or is in any manner instrumental in causing a patient to go to another physician or surgeon for surgical operation or advice as to, or treatment of, any physical or mental disease, injury or ailment and receives therefor from such other physician or surgeon any money, gift or other thing of value for such patient, or who has any agreement or understanding with such physician or surgeon to receive therefor any money, gift or other thing of value whatsoever from such physician or surgeon, without the knowledge and consent of the patient, shall be guilty of selling the patient within the meaning of this Act.

2. That hereafter any physician or surgeon or other person who knowingly receives any patient so carried, sent, or caused to go to him for any surgical operation, or advice as to or treatment of, any physical or mental disease, injury, or ailment, and such physician or other person pays any money, gift,

or other thing of value or promises any compensation whatsoever therefor, to such physician, surgeon or other person so sending or carrying such person to him, without the knowledge and consent of the patient, shall be guilty of buying the patient within the meaning of this Act.

3. That any person who buys or sells the patient within the meaning of this Act so defined in the next section hereof, shall be guilty of a misdemeanor, and, upon conviction, shall be fined for the first offense not less than \$50.00 nor more than \$100.00, and upon conviction of the second offense he shall forfeit his license to practice medicine and surgery in this Commonwealth. The Court so trying such case shall, upon conviction of the second offense, declare the license of such physician or surgeon to practice medicine or surgery in this Commonwealth cancelled, and such license so cancelled shall not be renewed in this Commonwealth.

Any acts or parts of acts in conflict with the provisions of this act are hereby repealed.

NEW MODEL ADVERTISING LAW.

Be it enacted by the General Assembly of the Commonwealth of Kentucky:

1. Any person, firm, corporation or association, who with intent to sell or in any wise dispose of merchandise, securities, service, or anything offered by such person, firm, corporation or association, directly or indirectly, to the public for sale or distribution, or with intent to increase the consumption thereof, or to induce the public in any manner to enter into any obligation relating thereto, or to acquire title thereto, or any interest therein, makes, publishes, disseminates, circulates, or places before the public, or causes, directly or indirectly, to be made, published, disseminated, circulated, or placed before the public in this State, in a newspaper or other publication or in the form of a book, notice, handbill, poster, bill circular, pamphlet, or letter, or in any other way, an advertisement of any sort regarding merchandise, securities, service or anything so offered to the public, which advertisement contains any assertion, representation or statement of fact which is untrue, deceptive or misleading, shall be guilty of a misdemeanor, and, upon conviction, shall be fined in any sum not exceeding \$500, or imprisoned in the county jail not exceeding ninety days, or both so fined and imprisoned in the discretion of the jury.

THE NEW PURE FOOD LAW.

Be it enacted by the General Assembly of the Commonwealth of Kentucky:

1. That every building, room, basement,

inclosure or premises, occupied, used or maintained as a bakery, confectionery, cannery, packing house, slaughter house, creamery, cheese factory, restaurant, hotel, grocery, meat market, or as a factory, shop, warehouse, any public place or manufacturing establishment used for the preparation, manufacture, packing, storage, sale or distribution of any food as defined by statute, which is intended for sale, shall be properly and adequately lighted, drained, plumbed and ventilated, and shall be conducted with strict regard to the influence of such conditions upon the health of the operatives, employes, clerks, or other persons therein employed, and the purity and wholesomeness of the food therein produced, prepared, manufactured, packed, stored, sold or distributed.

2. The floors, sidewalls, ceilings, furniture, receptacles, implements and machinery of every such establishment or place where such food intended for sale is produced, prepared, manufactured, packed, stored, sold or distributed, and all cars, trucks and vehicles used in the transportation of such food products, shall at no time be kept or permitted to remain in an unclean, unhealthful or insanitary condition; and for the purpose of this Act, unclean, unhealthful and insanitary conditions shall be deemed to exist if food in the process of production, preparation, manufacture, packing, storing, sale, distribution or transportation is not securely protected from flies, dust, dirt, and, as far as may be necessary, by all reasonable means, from all other foreign or injurious contamination; or if the refuse, dirt or waste products subject to decomposition and fermentation incident to the manufacture, preparation, packing, storing, selling, distributing or transportation of such food are not removed daily, or if all trucks, trays, boxes, buckets or other receptacles, or the chutes, platforms, racks, tables, shelves, and knives, saws, cleavers or other utensils, or the machinery used in moving, handling, cutting, chopping, mixing, canning or other processes are to be thoroughly cleaned daily; or if the clothing of operatives, employes, clerks or other persons therein employed, is unclean.

3. The sidewalls and ceilings of every bakery, confectionery, creamery, cheese factory and hotel or restaurant kitchen shall be so constructed that they can easily be kept clean; and every building, room, basement or inclosure occupied or used for the preparation, manufacture, packing, storage, sale or distribution of food shall have an impermeable floor of cement or tile laid in cement, brick, wood or other suitable material which can be flushed and washed clean with water.

4. All such factories, buildings, and other places containing food, shall be so provided

with proper doors and screens adequate, to prevent contamination of the product from flies.

5. Every such building, room, basement, inclosure, or premises occupied, used or maintained for the production, preparation, manufacture, canning, packing, storage, sale or distribution of such food, shall have adequate and convenient toilet rooms, lavatory or lavatories. The toilet room shall be separate and apart from the room or rooms where the process of production, preparation, manufacture, packing, storing, canning, selling or distributing is conducted. The floors of such toilet rooms shall be of cement, tile, wood, brick or other non-absorbent material, and shall be washed and scoured daily. Such toilet or toilets shall be furnished with separate ventilating flues and pipes discharging into soil pipes or shall be on the outside of and well removed from the building. Lavatories and wash rooms shall be adjacent to toilet rooms, or when the toilet is outside of the building, the wash room shall be near the exit to the toilet and shall be supplied with soap, running water and towels and shall be maintained in a sanitary condition.

6. If any such building, room, basement, inclosure or premises occupied, used or maintained for the purpose aforesaid or if the floors, sidewalls, ceilings, furniture, receptacles, implements, appliances or machinery of any such establishment, shall be constructed, kept, maintained, or permitted to remain in a condition contrary to any of the requirements or provisions of the preceding five (5) sections of this Act, the same is hereby declared a nuisance, and any toilet, toilet room, lavatory or wash room as aforesaid, which shall be constructed, kept, maintained or permitted to remain in a condition contrary to the requirements or provisions of section five (5) of this Act, is hereby declared a nuisance; and any car, truck or vehicle used in the moving or transportation of any food product as aforesaid, which shall be kept or permitted to remain in an unclean, unhealthful or insanitary condition, is hereby declared a nuisance. Whoever unlawfully maintains, or allows, or permits to exist a nuisance as herein defined shall be guilty of a misdemeanor, and, on conviction thereof, shall be punished as herein provided.

7. Every person, firm, or corporation operating or maintaining an establishment or place where food is produced, prepared, manufactured, packed, stored, sold or distributed shall provide the necessary cuspidors for the use of operatives, employes, clerks and other persons, and each cuspidor shall be thoroughly emptied and washed out daily with water or a disinfectant solution, and five ounces

thereof shall be left in each cuspidor while it is in use. Whoever fails to observe the provisions of this section shall be guilty of a misdemeanor, and punished as hereinafter provided.

8. No operative, employe, or other persons shall expectorate on the food, or on the utensils, or on the floors or sidewalls of any building, room, basement, or cellar where the production, preparation, manufacture, packing, storing or sale of any such food is conducted. Operatives, employes, clerks, and all other persons who handle the material from which such food is prepared or the finished product, before beginning work, or after visiting toilet or toilets, shall wash their hands thoroughly in clean water. Whoever fails to observe or violates the provisions of this section shall be guilty of a misdemeanor and punished by a fine of not more than twenty-five dollars.

9. It shall be unlawful for any person to sleep, or to allow or permit any person to sleep in any work room of a bake shop, kitchen, dining room, confectionery, creamery, cheese factory, or any place where food is prepared for sale, served or sold, unless all foods therein handled are at all times in hermetically sealed packages.

10. It shall be unlawful for any employer to require, suffer or permit any person who is affected with any contagious or venereal disease to work, or for any person so affected to work, in a building, room, basement, inclosure, premises or vehicle occupied or used for the production, preparation, manufacture, packing, storage, sale, distribution or transportation of food.

11. It shall be the duty of the officials in charge of the enforcement of the Pure Food Laws of the State, and of the State Board of Health, and the County and City Health Officers, and the duly appointed agents of all such, to enforce the provisions of this Act, and for that purpose such officers shall have full power at all times to enter every building, room, basement, inclosure, or premises occupied or used or suspected of being occupied or used for the production, preparation or manufacture for sale, or the storage, sale, distribution or transportation of such food, to inspect the premises and all utensils, fixtures, furniture and machinery used as aforesaid; and if upon inspection any such food producing or distributing establishment, conveyance, or any employer, employe, clerk, driver or other person is found to be violating any of the provisions of this Act, or if the production, preparation, manufacture, packing, storage, sale, distribution or transportation of such food is being conducted in a manner detrimental to the health of the employes and operatives, or to the character of quality

of the food therein being produced, manufactured, packed, stored, sold, distributed or conveyed, the officer or inspector making the inspection or examination shall report such conditions and violations to the chief pure food official, or to the State Board of Health, or to the chief county or city health officer, as the case may be, and such officer or officers shall thereupon issue a written order to the person, firm or corporation responsible for the violation of condition aforesaid to abate such violation or to make such changes or improvements as may be necessary to abate them, with such reasonable time as may be required in which to abate them. Notice of such order may be served by delivering a copy thereof to said person, firm or corporation, or by sending a copy thereof by registered mail, and the receipt thereof through the postoffice shall be *prima facie* evidence that notice of said order has been received. Such person, firm or corporation shall have the right to appear in person or by attorney before the officer issuing the hearing notice or the person appointed by him for such purpose, within the time limited in the order, and shall be given an opportunity to be heard and to show why such order or instructions should not be obeyed. Such hearing shall be under such rules and regulations as may be prescribed by the State Board of Health. If after such hearing it shall appear that the provisions or requirements of this Act have not been violated, said order shall be rescinded. If it shall appear that the provisions or requirements of this Act are being violated, and that the person, firm or corporation notified as aforesaid is responsible therefor, said previous order shall be confirmed or amended, as the facts shall warrant, and shall thereupon be final, but such additional time as is necessary may be granted within which to comply with said final order. If such person, firm or corporation is not present or represented when such final order is made, notice thereof shall be given as above provided. On failure of the party or parties to comply with the first order within the time prescribed, when no hearing is demanded, or upon failure to comply with the final order, within the time specified, by the Food Commissioner, the facts shall be certified to the Commonwealth's County or City Attorney of the district in which such violations occurred, and said attorney shall proceed against the party or parties for the fines and penalties provided by this Act, and also for the abatement of the nuisance: *Provided*, That the proceedings herein prescribed for the abatement of nuisance as defined in this Act shall not in any manner relieve the violator from prosecution, in the first instance for every such violation, nor from the penalties for such

violation prescribed by Section 12 of this Act.

12. 1. Whenever any of the duly authorized officers mentioned in Section 11 shall find any article of milk, meat or other food which is adulterated within the meaning of this ordinance, or any other article or substance which is detrimental to public health, such article shall be tagged or otherwise properly marked, giving notice that the product is suspected of being adulterated or detrimental to public health, and warning all persons not to remove the same until given permission by such officer, or the courts, and it shall be unlawful for any person or persons, firm or corporation to remove or otherwise dispose of same in violation of this section, and any person or persons, firm or corporation doing so shall be fined not less than ten dollars (\$10.00), or be imprisoned not to exceed fifty days, or both such fine and imprisonment.

2. Such tag or notice shall give notice that the article has been quarantined. The officer shall then petition the Judge of the Police Court, County or Circuit Court in the district in which the food is found for the condemnation and destruction of any such product. The owners or defenders of any such product or property shall be given the right to a hearing, first before the officer, if they so desire, and before the court. The notice of a hearing to be before the officer shall also state the length of time within which such hearing may be had.

3. In case the finding of the court is with the officer, the article shall be destroyed at the expense of the owner of the property, or by the owner of the property under the supervision of the officer, and in such case all other costs shall be taxed against the owners or defenders of the property, if such appear, or shall be collected, if no one appear, against the owner or agent properly ascertained.

13. Whoever violates any of the provisions of this Act, or who refuses to comply with any lawful order or requirement duly made in writing as provided in Section 11 of this Act, shall be guilty of a misdemeanor and on conviction shall be punished by fine of not less than ten dollars (\$10.00) nor more than one hundred dollars (\$100.00), or by imprisonment not to exceed 30 days, or by both fine and imprisonment, and for the second and subsequent offenses by a fine of not less than fifty dollars (\$50.00) nor more than two hundred dollars (\$200.00) or by imprisonment in the county jail for not more than ninety days, or both, in the discretion of the court; and each day after the expiration of the time limit for abating insanitary conditions and completing improvements to abate such conditions, as ordered as aforesaid, shall constitute a distinct and separate offense.

14. All acts and parts of acts in conflict with the provisions of this act are hereby repealed.

ORIGINAL ARTICLES

THE MODERN MEDICAL AND SURGICAL TREATMENT OF TUBERCULOSIS.*

By EVERETT MORRIS, Oak Forrest, Ill.

Any recognized treatment of pulmonary tuberculosis is modern. How helpless was the consumptive, and how irrational was his treatment a generation ago.

After having the doom of tuberculosis pronounced upon him, and realizing the futility of its treatment, a young physician in the City of New York, in 1873, abandoned the desire of professional ambition, wealth and fame, and with faith in the great out-door, turned his face to the snow-covered mountains of the Adirondack wilderness for relief. Here, in the midst of many trials, his health improved, but not until after an unspeakable hardship of two days stay in a snow-drift did he seriously consider the possibilities of pure cold air and rest in the treatment of his disease. Later, by putting this theory into action, the treatment of tuberculosis was completely revolutionized by that optimist and sufferer; philanthropist and beggar; scientist and Christian—Edward Livingston Trudeau—American pioneer of the open air and rest treatment of tuberculosis.

During the first year of this new experience at Saranac Lake, Dr. Trudeau dreamed "that the forest around him melted away, and that the whole mountain side was dotted with houses built inside-out; as if the inhabitants lived on the outside." Thirty years later, and at the twenty-fifth anniversary of the establishment of the Adirondack Cottage Sanitarium this dream came true.

At this, the first, Annual Conference of Tuberculosis Workers, forward-looking men and women, are dreaming of a new Kentucky; they have a panoramic vision of the "dark and bloody hunting ground" converted into an enlightened country, its people enthusiastically demanding that every community, from the highlands to the lowlands, provide modern institutions for every one suffering from man's greatest foe—tuberculosis.

I have been asked to discuss, with my co-workers, the modern medical and surgical treatment of tuberculosis, and I have thought it within the scope of my subject to say some-

*Read before the First Annual Tuberculosis Conference State of Kentucky, February 9, 1916.

thing about equipment. Modern treatment, or better, modern management of tuberculosis must of necessity call for modern equipment, which, in turn, calls for properly constructed buildings, trained, medical and nursing staffs, a sufficient budget to meet necessary expenses, and co-operative executive board.

The establishment and maintenance of county or district sanatoria is a community problem and must be a real part of the community life if successfully operated. The benefits enjoyed by any social unit are not to be measured by the number of tuberculosis patients returned to bread-winning efficiency, but also by that intangible and incalculable protection against infection which extends into the most intricate meshes of the warp and woof of our social life.

Again, the sanatorium graduate is the best advertisement for the anti-tuberculosis movement, since he is returned to society fully qualified to teach the gospel of right-living, and, by his own example, allay the fears of those who have acquired phthisiophobia.

The treatment of my subject will be from an institutional viewpoint, and it will not be my purpose to belittle home care.

One of the most radical changes made by modern management of the tuberculous is the viewpoint of the patient. Formerly, the sufferer was kept in blissful ignorance of the nature of his malady, but now, upon entering a modern institution, the extent and nature of the disease is pointed out and detailed information obtained as to the source of infection whether acquired during childhood, or from bad housing, or occupation. The patient is given an insight into the cause, prevention and curability of his disease. He is taken into full partnership with the physician with the understanding that each put into the venture an equal amount of capital. He is given to understand that "chasing the cure" is not a passive occupation. I believe in McLean's dictum: "if the phthisical patient would live, he must work for it." The beginner is also taught the necessity of pure air, rest, wholesome food, optimism, and other modern agencies as may be indicated, such as, graduated labor, limited use of drugs, tuberculin and vaccines, helio therapy (sun treatment), and artificial pneumothorax.

To conquer this common foe, it is often necessary completely to readjust one's routine of living. The success in the management of tuberculosis, then, in a human repair-shop, does not depend on the administration of drugs or the skillful manipulation of surgical instruments, but on three words, education, discipline and optimism.

It takes discipline, firm, but kind to per-

suade a new patient that fresh air is the best medicine for night-sweats, or that typhoid rest controls a very large percentage of high fevers. It takes optimism of the highest type to allay the fear of a patient suffering from the first hemorrhage.

The modern methods of sanatorium care should not be confined to the surveyor's plot of the institution grounds, but extend into the furthest ramifications of human endeavor to discover and keep under observation every contact of all patients as far as it is possible to be done.

In the modern treatment of phthisis there is being used to a limited extent what is known as a system of graduated labor. This system has a high therapeutic merit, in addition to its economic value. Its application, difficult as it is, means a more rapid, and a more certain discharge of the patient, which is the coveted goal of all treatments.

The Cook County Tuberculosis Hospital, with over six hundred patients, elaborated this method of treatment about six months ago, and, although it is too soon to draw any conclusions, it already promises satisfactorily to fill a period in a patient's sanitarium-life, which heretofore was usually unoccupied. This period is, I think, a very dangerous one as it is the restless time between the cessation of all symptoms, and the time to resume work. The system of graduated labor meets this obstacle; it does more, for it hastens the beginning of the symptomless period, and shortens the interim between it and the discharge. It is, therefore, a distinctly economic process.

Graduated physical exercise, has its important field in the treatment of tuberculosis in certain ambulatory cases. It is prescribed when indicated with just as much professional soberness as a drug. Patients with little or no temperature curve or no unusual pulse rate, are started on five, ten or fifteen minutes walk, increased daily, if temperature and pulse taken before and after exercise are not increased. The amount of exercise is increased, until patient is given a small bucket to carry containing a few pounds of dirt. The weight is increased gradually, until the patient is able to do several hours of hard work. A very thorough system of checks on all symptoms is constantly kept. We are now using our graduated labor class for more practical purposes. The tailor, who abhors mopping, is furnished material, which by a process of evolution, rivals any sleeping-out bag for children on the market.

The scientific rationale for this therapeutic measure is based on undisputed laboratory findings in the blood which show that exercise supplies the necessary stimulus to induce artificial auto-inoculation, and that this can

be regulated by the amount and time of exercise.

Surgery in the modern treatment of pulmonary tuberculosis is limited almost exclusively to the palliative, and often curative, agent—artificial pneumothorax. Medical men for many years have observed that some cases of pulmonary tuberculosis were benefited by compression of the diseased parts. This compression was usually due to the accidental presence of large amounts of fluid or air in the pleural cavity. It remained, however, for Forlanini, an Italian surgeon, in 1882, to suggest the advisability of producing an artificial compression of the lung by the introduction of gas into the pleural cavity. After many years of experimental work, he reported in 1895 his first cured case of advanced pulmonary tuberculosis by the artificial pneumothorax method.

This therapeutic operation is done by introducing warm nitrogen or atmospheric air into the pleural sack under a slight pressure. A small needle is attached to the air reservoir by a system of rubber tubes; the needle is introduced, under local anesthesia, between the ribs and a water manometer which is also attached to the system of tubes acts as a saphophore for the surgeon. Small amounts of sterile air are frequently introduced until the diseased lung is completely collapsed.

It is the ideal treatment for obstinate hemorrhages, but unfortunately its application in other conditions is limited to advanced cases having the disease only on one side.

A digression may be pardoned if I call attention to the rarity of purely one-sided cases. On the receiving wards where there were ninety-six patients only two proved, as far as I could judge, ideal cases.

The purpose of this modern surgical procedure in the treatment of hopeless consumptives is to collapse and rest the diseased lung and also remove the source of toxicity.

Recently I had the privilege of reporting forty-five cases I had treated, and was able to state that the treatments were fully compensated for by the amelioration of many distressing symptoms and occasionally the reclamation of a useful citizen.

Finally, the superstructure of the modern medical and surgical treatment of tuberculosis must rest upon progressive medical and surgical therapeutics and an intelligent, sympathetic civic consciousness. The obligations and responsibility of the physician are not discharged by simply prescribing for the sick individual; the field of usefulness to the greatest number is limited only by the number of persons exposed to this focus of infection. Tuberculosis is a social problem and must be treated as such by all who are on the firing

line. The quickening of the civic conscience will result in adequate governmental expenditures for an adequate educational propaganda; for an adequate number of field nurses and tuberculosis dispensaries and for adequate hospital accommodations for all who may knock for admittance.

PURITY IN THE LIFE AND LANGUAGE OF THE PHYSICIAN.*

By J. W. CRENSHAW, Cadiz.

A FOREWORD.

This is the second time you have honored me with an invitation to address your society. In my former paper I dealt with "The Doctor's Faith in God." Having selected for this paper another subject along moral lines, I felt somewhat inclined to offer an apology, as I thought it possible that a paper on a subject strictly medicinal might be more acceptable to you. But having read an interview in the June, 1915, *Cosmopolitan Magazine*, telling of the work of one of the foremost of American surgeons, I have concluded to give you an extract from that unusual paper, as an explanation as to why I do not feel inclined to apologize for the subject selected. The writer reports the famous Johns Hopkins Professor as having used the following language: "Oh, yes. I am a preacher on Sundays you know. I preached eight times last Sunday, and shall preach eight times next Sunday, and each Sunday for some time to come. In fact, I am touring the entire state of Maryland, county by county, in a crusade for better observance of the Sabbath, and for a general religious awakening. I go in my motor car, and arrangements are made in advance, so that I preach in eight different churches, beginning at ten in the morning and ending at about ten at night. I preach the word of God directly from the scriptures—not modern science, or new-fangled criticism, but old-fashioned morality right from the Bible text. I speak mostly to the common people, and try to bring the matter home to them with common place illustrations. I speak impromptu, and never give the same sermon twice, although, of course, I may cover somewhat the same ground in successive sermons." If Dr. Howard Kelly, the greatest of American pelvic surgeons can with his busy life deliver eight sermons a Sunday, surely I need not apologize for reading two papers along moral lines to the same society, within one year, and you can afford to listen to them.

After receiving the invitation of your Secretary, to read a paper before your society,

*Read before the Christian County Medical Society.

in turning the matter over in my mind, as to what I might bring to your consideration with some degree of profit, the subject which I have selected, and which I have announced as the heading of my brief paper, came in an unexpected way, and from an unlooked-for source. Passing down the street, I ran on to a social gathering of friends, and a young acquaintance stopped me, to relate what he was pleased to call an amusing incident. By way of apology, he began by saying, "I suppose that I can afford to tell this, as it was related by my pastor in our hunting camp." My young friend is of irreproachable character, clean of life, and I never before knew him to relate an anecdote even bordering on the obscene; but the preacher in an unguarded moment had permitted his "tongue to slip" and at a most inopportune time planted a seed-thought of which he was unconscious, and for which he would doubtless be heartily ashamed should he ever learn of its use and baneful effects. I have related this brief incident for the helpful lesson which it carries, and to lead up to my subject, "Purity in the Life and Language of the Physician."

As this paper is to be a record of actual observation and of personal experience, I trust that you will look with charity upon the *ego* which must of necessity be brought prominently to the front, and aid the writer to hide his individuality behind the effort to teach a needed lesson, which is the prime object of the paper.

In the beginning, I want to take this opportunity to pay a just and meritorious tribute to the members of the medical profession, with whom it has been my fortune and pleasure to associate for over forty years of active practice. In scores, yea hundreds of consultations, these men have as a rule, and with very few exceptions, been men free from the suspicion of gross immorality, and clean of speech. This frank tribute forces me in dealing with the subject of my selection to use the exceptions and their influence for bad, and is in no sense a wholesale charge against my professional brethren.

Taking up the thread of life very early in the profession of my choice, on the tablet of my young manhood memory there stands out the picture of an old gray-haired professor, who, while he was "a man of parts," and no better to be found in his chosen line, he seemingly never permitted an opportunity to pass, to adorn a lesson with an illustration or an anecdote, bordering on the obscene, and often clear over the line of decency. He might not have been impure of life, but he was painfully vulgar of mind and heart, and seemed to revel in the fact that he was laughed at by the thoughtless and impure young men of the

class. Having met his students at various times since our college days, without a single exception, when the name of the old professor was mentioned, his obscene language was commented on, and reference made to his corrupting influence over young men.

A MARKED CONTRAST.

Belonging to the same faculty, and speaking to the same class from day to day, I now place on record a tribute, and pen-picture of one of the most beautiful characters it has ever been my pleasure to know. He was the "dean" and by every conceivable right the leader in this faculty of great men. A gentleman of "The Old Southern School Type," whose language at all times and on all occasions had the innocency of childhood, and the purity of maidenhood, and yet he was by no means a "weakling." He was indeed of giant intellect, and a man among men. But he towered as a mountain peak above that class of men, who when they begin to relate an anecdote, first look around to be sure that there are no ladies near, before beginning, enter an apology, and then relate that which ought to bring the blush of shame. The power and influence of this delicately constructed, Christian gentleman professor, has lingered in my memory through all the years as a lasting and sweet benediction.

I present these two types of manhood, gentlemen, in marked contrast, with the hope that the obnoxiousness of the one, will set forth in bold relief the attractiveness of the second, and thereby indelibly plant the lesson intended.

Having dropped into the narrative style, I trust that you will pardon me for continuing, and permit me to add, that after about ten years practice, I went up to New York City for a course of special work. The four months thus spent, stand out as the most profitable of any similar space of time in my life's work as a practitioner of medicine.

While in the great city, it was my fortune to be under the direct teaching as a private pupil of a noted gynecologist, who so had the confidence of his clientage, that some of his pay patients permitted him to use them in his private office for teaching a small select class of student-practitioners. The first impression of the power of this great man came to me in a very simple incident. He had on the operating table a poor, but highly respectable lady patient. The delicate manner in which the doctor handled the case, and his gentlemanly consideration, while the patient was under the anesthetic, so impressed one of the attending practitioners that he referred to the fact in a side-whisper, but unintentionally overheard by the operator. He very promptly said,

"Gentlemen, I have made it a rule from which there is no variation, that no matter from what walk in life a patient may come, to give her that consideration, which I would desire from another doctor to my own wife." He seemed to live up to this high ideal. The impressions of that hour, and the incident have lingered with me through all the years, and whatever I may have possessed or do now possess that is gentlemanly and courteous in the sick-room I owe largely to the lessons learned in the office of the hightoned New York doctor.

ANOTHER INCIDENT OF THE METROPOLIS.

Another incident which occurred while I was on this trip to the metropolis, is worthy of mention for the lesson which it contains to the young doctors who may be listening to this paper. I carried letters of introduction to a number of prominent doctors from Dr. E. S. Gaillard, of Louisville, Ky., as I went as an accredited correspondent of his weekly journal, during my stay in the city. The first letter that I presented was to Dr. Louis A. Sayre, the great orthopedic surgeon, then at the zenith of his well-earned reputation. When I entered his office, I was unexpectedly introduced to a Kentucky doctor of more than national reputation, but whom I had not had the pleasure of meeting. The Kentucky doctor was on his way to Europe for his summer vacation, and had called to pay his respects to the great New York Surgeon. I had heard much of my new acquaintance from Kentucky, that I should meet the two great men at the and counted it quite a fortunate coincident same time in the same room, and under such pleasant environments. I congratulated myself that I would enjoy a rich treat in being permitted to listen to their good humored "professional sparring," as it was well known that they differed radically on some points dividing the profession at that time.

Imagine my disappointment and chagrin, when in the course of a brief discussion, my Kentucky friend violated all of the rules (as I had been taught to believe) of propriety, by emphasizing his well-made points and vigorous home-thrust, by "taking the name of the Lord in vain" with such frequency from daily habit, that I could feel the color climbing to the edge of my hair, and began to hang my young head in shame. I felt wonderfully relieved, when my Kentucky friend closed the discussion and took his departure. My host probably noticing my discomfiture, politely offered an apology for the departing guest, and with genuine refinement dismissed the incident. The Kentucky doctor who figured in the circumstance related, was entitled to all the honor bestowed upon him, and to wide reputation to which he had attained. If

for his brusqueness could have been substituted suavity of refinement, and for his curse-words, the language of the Christian gentleman, what a power he might have been for good.

CONCLUDING REFLECTIONS.

Gentlemen, there is a comfort that comes from an inner-consciousness of being clean, and doing right and being right, that outweighs every other consideration in life. The Divine decree is "That no fountain can send forth sweet water and bitter." It is also axiomatic, "That for the stream to be pure the fountain must be uncontaminated." Every well informed doctor admits the truth and force of these platitudes when it comes to the contagiousness of disease. It is equally true of the individual inner life. A foul-minded doctor can not be a clean-mouthed, and clean-lived practitioner of medicine.

"Out of the heart are the issues of life," and "words are the signs of ideas," and the tongue that "wags the words" is controlled by the mind, and the mind determines whether they shall be "fair or foul."

HEMOPHILIA, REPORT OF CASE.*

By HENRY M. RUBEL, Louisville.

I desire to present for your consideration this evening a report of a case, which I am sure, if you have not encountered so far in your practice, will, when brought to you, cause you many anxious moments, as well as to stimulate you in recalling remedies which you heretofore considered as obsolete in the treatment of hemorrhage. I will sketch rapidly the history of this case, and the line of treatment instituted, eliminating, as far as possible any theoretical causes which may have been responsible for this condition. And in conclusion, I ask, as a personal favor, as much discussion as possible, so that I may be enlightened as to any mode or line of treatment not carried out or mentioned.

Baby S., male, white, born in hospital December 2, 1914, after a normal birth. Child normal in every respect, weighed seven and one-half pounds. Color good. Baby progressed nicely from day to day, only a slight loss of weight being noted. Bowel movements normal in all respects. One week, or rather I should say, eight days after the birth of the child, according to a Jewish ritualistic custom, the baby was circumcised by a Mohl. By some oversight I was not notified of this procedure until a few hours after the operation had been performed and my acquaintance was made known by a rather urgent request to come to the hospital immediately as

*Read before the Jefferson County Medical Society.

my little patient was bleeding quite profusely. I arrived two hours after the child had been circumcised and after removing the bandage found quite a good sized spurter upon the dorsum of the penis. This was clamped and tied and other points of hemorrhage sought for. No distinct points of hemorrhage found, but a slow capillary oozing present, which resisted any and all forms of treatment instituted to check same. Astringents and styptics were applied locally and I will say that I believe I ran the entire gamut of our therapeutic armamentarium, from acetic acid to preparations of zinc, without noting any appreciable lessening of this ominous oozing. I then tried suturing, and with a very fine curved eye needle and a double naught plain cat-gut suture, sutured every oozing spot found. But it proved fruitless as every place the needle was introduced new areas of bleeding were noted. Constant compression was now instituted—gauze pads soaked in hot saline solution were applied to penis and changed as soon as pads cooled. This was kept up for about one hour or so and seemed to prove of some worth but never the less the oozing, though somewhat less, persisted. After working a number of hours and finding my efforts were not meeting with any marked degree of success I decided to make use of a heterogenous serum.

The child's color was now, five hours after the circumcision, losing its pink tint and a progressive whitening was noted. The temperature was subnormal, being 97 degrees, and the pulse very rapid. I now gave a full injection of coagulose, subcutaneously and awaited results most confidently. I also applied the coagulose powder directly to the bleeding surfaces, but could not note any sustained improvement. Some slight improvement noted after injection and after bandaging the penis I left the infirmary hoping the child would go through the night and be considerably improved by morning.

Baby refused the breast and nourishment was administered per rectum—milk and saline solution with some whiskey being given when deemed necessary.

Upon my return to the hospital the next morning I found a child whose progressive whitening of the skin was marked, with a gradual drying up of the tissues. The face was pinched, muscles weak, pulse rapid, weak and thin; respiration deep and sighing and very weak. The oozing, while not marked, was of such a nature as to foreshadow a hasty dissolution unless some powerful remedy was found. The blood now resembled a poor quality of red ink. I now recommended to the parents a transfusion operation as the only means left of saving the child's life,

but this was refused. It was now twenty hours after the operation and the child was in extremis. I now obtained a fifteen cubic centimeter (15 c.c.) tube of horse serum and injected this subcutaneously in the interscapular region. After withdrawing the needle a little oozing of blood was noted from the needle puncture and despite our efforts bled, drop by drop, for six hours.

The child's temperature was now up to ninety-nine degrees (99) with a rapid, weak and thready pulse.

Oozing of a very pale looking blood continued from the circumscision wound. Temperature now subnormal, 97 degrees.

Seven hours after the normal horse serum injection I again resorted to coagulose (P. D. & Co.) giving a full dose in the right lower axillary region. This injection seemed to me to have become pocketed, in other words, the absorption was so slow that the entire volume of fluid seemed to remain in this region, en masse. The end seemed to be near. Saline solution and whiskey was resorted to at two hour intervals and was retained, but despite my efforts ground was constantly being lost. After a period extending over thirty-five hours (35) it was my sad duty to pronounce the child dead.

No hemophilic history obtained from either the father or mother, as well as any leutic history or history of any old or recent infection.

In conclusion I wish to quote Dr. V. D. Lespinasse, of Chicago, whose article in *The Journal of the American Medical Association*, June 13th, 1914, on "The Treatment of Hemorrhagic Diseases of the New-born by Direct Transfusion of Blood" will be appreciated and highly valued by any practitioner who has had any such condition to battle with: "Direct transfusion of blood stops the bleeding, restores the lost blood and aids in overcoming infection. Direct transfusion of blood has cured where all other methods have failed. Transfusion should be used early, but so long as there is a spark of life evident, it is never too late to transfuse.

DISCUSSION.

Jno. J. Moren: I have had only two experiences with bleeders. About fifteen years ago I treated a man for Raynaud's disease, and he recovered from the first attack but shortly afterwards suffered a second attack. I referred him to Dr. Hendon, who did a nerve-stretching operation, which was advocated at that time for the relief of Raynaud's disease. I do not recall whether the opening was made in the arm or the leg, but at any rate, after it had been sutured it continued to bleed and could not be stopped. He was given a hypodermic and bleeding began

at that point. Every known measure was resorted to but without avail and the man bled to death. This man gave a history (although he said nothing about it prior to operation) that about twelve years previous he had suffered an injury of some kind and very nearly bled to death.

The other case was in a woman who had exophthalmic goiter and badly diseased tonsils, which we believed should be removed. She was given lactate of calcium and one tonsil was removed without any trouble. Two weeks later the removal of the second tonsil was attempted without the use of lactate of calcium, and she very nearly bled to death before the hemorrhage could be stopped.

W. C. Dugan: We know very little about the pathology of this condition. It is claimed by some to be due to a lack of coagulability of the blood. That is certainly not true. I lost a patient about two years ago from hemorrhage after opening an appendicular abscess, and some of the firmest clots I have ever seen were removed from this cavity.

Another theory advanced is that this condition is due to changes in the blood vessels. This is refuted by the case of a professor of surgery in the University of Virginia, who developed this condition, and to save his life his arm was amputated. A most careful and searching examination of the tissues of the arm failed to reveal any changes or lack of development in the blood vessels.

In Dr. Rubel's case, he certainly did everything possible except blood transfusion. A case of this kind is certainly one of the most trying ordeals that one can go through.

Virgil E. Simpson: I have always been inclined to believe that hemophilia is due to some fault in the constitution of the blood itself, rather than to any change or lack of development in the blood vessels. I would hardly call the second case mentioned by Dr. Moren one of hemophilia. We not infrequently see, following the removal of diseased tonsils, hemorrhage that is very difficult to control, and yet the patient is not necessarily a hemophiliac. I would say that Dr. Moren's was such a case.

In Dr. Rubel's case, the only thing that could have been done and was not done, was something which he advised and which was refused—namely blood transfusion.

J. Rowan Morrison: Hemophilia seems to be transmitted through families, like albinism, color blindness, etc. It ordinarily occurs in the male and may be transmitted from father to son while daughters of the same man will show no evidence of it. I am inclined to believe that it is due to the lack of some essential constituent of the blood.

A. W. Nickell: I have seen only one or two of these cases. Most of the modern prepara-

tions for the treatment of this condition do not seem to produce results. I would like to ask whether any one has had any experience with the injection of human blood serum, as recommended by Welech, and whether or not it has proved efficacious.

C. W. Kelly, Jr.: I recall one case in a boy of nineteen years, who came into the Manhattan Eye and Ear Hospital bleeding from the nose. We packed the nose and gave him adrenalin, cocaine, lactate of calcium, etc., without any apparent effect. Then we tried the injection of blood serum, and this seemed to stop the hemorrhage. Two days later we removed the packing from his nose and he appeared to be all right for three or four days. Then he commenced to bleed again and we gave him more serum, and finally it became necessary to do a blood transfusion. That patient remained in the hospital for two months, having attacks of bleeding at intervals, but when he left the hospital he had not had an attack for two weeks. I believe transfusion did the work. We heard nothing further from the patient after he left the hospital.

C. G. Forsee: Genuine hemophilia is rather rare, and unless there is a history of a similar condition in some other member of the family the diagnosis is somewhat doubtful. Hemophilia is essentially a transmitted condition, and it is very doubtful whether it ever occurs in women. One authentic case occurred in this city, in the person of a doctor, two uncles of whom died of hemophilia, and whose grandfather was a hemophiliac. I believe Dr. Abell reported the case to this society a few years ago.

Bernard Asman: As Dr. Forsee has pointed out, cases of genuine hemophilia are, comparatively speaking, quite rare, and yet I suppose each of us here to-night have seen a case or two. I recall, rather vividly, two cases, in one of which we had reason to believe, before operating, that the patient was a hemophiliac, while in the other we did not. The first was a medical student who required a rectal operation. In this case we took every precaution against hemorrhage. Lactate of calcium was administered, and at the operation itself, the greatest precautions were taken to close all the vessels completely, and the wound was carefully closed with fine sutures. Then the dressing and bandage were put on in such a manner as to exert considerable pressure over the site of the wound. In this case there was no great amount of hemorrhage. There was some oozing or, as some one has aptly termed it "sweating" of blood but this was readily controlled.

The other case was in a woman, 35 years of age. In this case we had no reason to suspect hemophilia. Operation was done in the usual way. However, it seemed to me that the blood did not coagulate as readily as it should, and

this made me think that perhaps the patient was a hemophiliac. Care was taken to control the hemorrhage absolutely, and the nurse was instructed to watch the patient carefully. I heard nothing from the case until the next morning when the nurse called and said the patient was in very bad condition. I found the patient practically exsanguinated. Apparently there had been gradual oozing of blood into the rectum which was afterwards discharged into the dressing. I got busy immediately and she finally recovered. She later told me that she bled very easily; that a few weeks before, a little blister on one of her fingers had broken and bled for three or four days. Her husband also told me that a sister of this woman had died a number of years before, following an abdominal operation in which it was impossible to stop the flow of blood. This history was not obtained prior to the operation, and the patient was given no lactate of calcium, nor anything else. I used horse serum in this case, and believed at the time that it was of considerable benefit.

THE CARE AND COMFORT OF THE SURGICAL PATIENT.*

By A. C. L. PERCEFULL, Louisville.

The writer was prompted to choose this subject for a paper, because of the great neglect on the part of the surgeon of this one most essential part of the treatment of the surgically sick. Too little is written upon this subject in our textbooks, and journals, and spoken of in our societies. Too little stress is put upon it by teachers in our medical schools. Little or no attention is paid to it by many surgeons in their practice.

So many doctors are so eager to become surgeons before they have had experience enough with the sick to be able to distinguish between real and apparent suffering. So intent are they on their operative technique, that they think of nothing but the operation and lose sight of this one great essential—making the patient comfortable before, during or after the operation.

The sooner surgeons or would-be-surgeons realize that there is more to surgery than the wielding of the scalpel; the sooner they realize that it is just as much their duty to make their patients comfortable as it is to operate upon them, the sooner will a great deal of unnecessary suffering and discomfort be relieved, that now goes by unnoticed or unheeded or through ignorance unrecognized.

In all probability nothing new will be mentioned in this paper. In all probability you who do surgery will say that you do all you

can to make your patients comfortable. But, do you?

No, you do not. It has been my observation for a number of years that surgeons either through indifference, negligence or ignorance, or through fear of breaking some time-honored practice or custom in treating operative patients omit much that might make their patients more comfortable. Some of these time-honored customs will be mentioned later.

Surgeons are too prone to say, "Oh, well you know you must have some pain and you will necessarily be uncomfortable. Now just try to be patient, you are going to be all right, you are fixed up fine now." Then with this same feeling of satisfaction they go outside and tell the patient's family how successful the operation was, etc. This is done so much that the expression "The operation was successful" has become universal, no matter what happens to the patient. Surgeons are too prone to lose sight of the fact that their patients are still human and subject to all the ills, discomforts, etc., to which the human flesh is heir—and then some.

The scope of this paper will not include any surgical procedure or technique, save such as might bear upon the comfort of the patient. By comfort we wish to imply both mental and physical, for we feel that they go hand in hand or at least one often has an influence upon the other.

The surgeon's duty to his patient does not begin when he takes his scalpel in hand, nor does it end when the operation is completed. For the same of convenience we will take up the three stages in which the surgeon is called upon to care for operative patients.

First, the pre-operative stage.

Second, the operative stage.

Third, the postoperative stage.

In the first stage we desire to call your attention to a few things that are often or nearly always neglected. Just as soon as an operation is decided upon, the surgeon's duties have just begun. It is in this stage that so much can be done to relieve the patient's mind and anxiety thereby aiding the successful outcome of the case. Take the patient into your confidence, talk plainly and freely with him, make him feel that you are interested in him. Do not boast of the number of patients and serious cases you have on hand, for he will know then that your thoughts and mind might be elsewhere, and that he might be neglected for some of the other very serious cases you have. You can show your patients that you are interested in them without making them think their case is terribly serious. Explain fully in a plain, clear way what you contemplate doing and what results you expect, at the same time assuring them that they

*Read before the Jefferson County Medical Society.

will not be allowed to suffer unnecessarily and that everything will be done to make them comfortable, and then, keep your promise.

We feel that the patient's great fear is that of suffering and discomfort incident to the operation rather than the possibility of dying. Be frank and honest with them and gain their confidence and you will add a great deal to their mental comfort. Study their eccentricities, their habits, as well as their general makeup both mental and physical. Try to learn of any idiosyncrasies that they may have. In the latter, the family physician can be of great assistance. Right here let me state that the physician should be kept in the case from the beginning to the end of the same. In the first place it is due the patients, for they have confidence in the family doctor. When their doctor is around their anxiety is relieved to a great extent. They have been accustomed to consult him when in distress and it is only natural that they would want him when about to undergo an operation. In the second place you might need him. He may be of very great assistance to you just for the reason that he probably already knows more about the patient than you will be able to learn during the whole time he is under your care. In the third place it is due the doctor. He should not be ignored as we have seen him ignored numbers and numbers of times.

If the patient is to be given a general anesthetic, his condition should be fully explained to the anesthetist. He should, if possible, visit the patient the day before the operation, to make his own physical examination, explain fully about the anesthetic so that he will not be frightened when the same is administered. If this is done we feel that the patient will have more confidence in the anesthetist and not fear anesthesia so much, for the fear of the anesthetic is second to none, and incidentally we believe the anesthetic fee will be paid more freely because he will feel that you have taken some interest in him and have done much to earn your fee.

The assistant also should not be kept in the background. He should at least be introduced to the patient, or better still he should, if possible, visit him with the surgeon and see his condition before being brought to the operating room. In the first place it is due the patient for two reasons. He should know all who are to take an important part in his operation, and then too, suppose for some reason the surgeon is unable to visit the patient and do the dressings, etc., the assistant goes in an utter stranger, is compelled to explain that he is so-and-so's assistant and helped to operate upon him. This may be satisfactory, but still the patient not knowing possibly that

there was an assistant may feel that he doesn't just exactly understand the case, etc., whereas, if he had met the assistant beforehand and knew that he was familiar with the case his anxiety would be much less.

Then too, it is due the assistant because if he did not want the experience (and often that is all he gets) he would not be assisting anyone.

The operation should be discussed by the surgeon with the assistant, the entire procedure mapped out as nearly as possible so that the operation may be performed with smoothness and dispatch. This is doubly essential where a local anesthetic is to be employed. The reason for this is obvious. There should be a thorough understanding so that as few words be spoken in the operating room as possible. Those of you who have been assistants know how seldom the above is done. It is useless to say that every minute of time saved in the operating room will aid in the successful outcome of the case.

It is hardly necessary for me to say that the patient should be relieved of all worry about selecting the room at hospital, making arrangements, etc. In this the surgeon can be of great assistance because he is usually familiar with the rooms, prices, etc.

And just here we wish to make a few remarks about hospital rooms. Did you ever lie flat of your back, alone most of the time, for hours, days, weeks and months possibly, gazing at four bare walls and the ceiling, with nothing to break the monotony? Of all the gloomy, lonesome, unattractive, cheerless places the average hospital room heads the list. Will not the hospitals ever realize that the more homelike and cheerful they make their rooms the better satisfied, contented and more comfortable will their patients be? We feel that it is time the doctors were demanding more cheerful surroundings for their patients.

After all arrangements have been made and your patient is settled in the hospital, certain preparations are necessary and usually carried out the day before the operation. Orders for these should be explicit and not general. Don't say, "Prepare patient for such and such an operation," but tell just what you want done. How often have we seen patients sent to the operating room with insufficient preparation or preparation that doesn't meet with our approval. In nine cases out of ten it is because explicit orders have not been given.

Do not lose sight of the fact that your patient's first night in the hospital is often and without exception, we believe, a very trying one. He is in strange surroundings, dreading more or less what the morning will

bring and consequently he does not rest, and if he does not, what condition will he be in to undergo what is before him? How does a well person feel after not resting at all for a whole night? We think it is your absolute duty to see that your patient has some simple remedy to help him rest and sleep the night before the operation. We have, and so have you, seen this very thing neglected time and time again.

We do not believe in thoroughly purging every patient because this has a tendency to weaken him and we know it dehydrates the tissues and naturally increases the thirst and anything that will increase postoperative thirst we know is harmful. It also has a tendency to increase postoperative distention. We believe that castor oil is the ideal cathartic.

We also feel that it is harmful to starve your patient before operation, as it has a tendency to weaken him, cause constipation and postoperative distention, thereby adding to his discomfort.

Having been properly prepared and given a good night's rest we bring him now to the second stage.

The first important thing to be remembered in this stage is "be on time,"—don't for any preventable reason keep your patient waiting. Every minute you are late seems an hour to him. Don't fail to see him as soon as you get to the hospital, speaking an encouraging and cheerful word to him. It will increase his confidence and relieve the mind. By all means see that his physician is there.

If he is able, let him walk to the anesthetic or operating room as the case may be; let him be as near normal as possible. See that every thing is ready in operating room before starting the anesthetic. If local anesthesia is to be employed be sure that every thing is ready and the procedure is thoroughly understood as far as possible by all operating room attendants. Avoid conversation and commotion as much as possible.

Just a word as to the anesthetic. Of course, the anesthetic should be selected such as will suit the case. It is questionable whether there is very much difference in after-pains of patients operated upon under local and those operated upon under general anesthesia, with the exception of quinine and urea hydrochlorid, the effect from which we know last for some time. As to shock, there is possibly a slight difference in favor of the local anesthetic.

This we do know, that the general anesthetic often causes great discomfort from nausea and vomiting. So it would seem that where it is possible local anesthesia should be used, for the comfort of the patient if for no other

reason. Then too, patients fear to be put to sleep. Add this to the fear of the operation and its outcome and it is easy to see why there is so much anxiety. If you can assure him that it will not be necessary to put him to sleep, you will tranquilize his mind, thereby add to his resistance which has much to do with the successful outcome of the operation.

Now for the operation.

First all the position of the patient on the operating table should receive more consideration than it does. It should be as natural as possible, yet in such a position so that the part to be operated upon is easily accessible. Try not to interfere with either respiration or circulation. See that no important nerves are unduly stretched and that pressure is taken off same. The table should be padded sufficiently thick to prevent pressure pains.

If the lumbosacral curve is very pronounced or the patient has prominent buttocks, a small pillow should be placed under the small of the back, by so doing you will relieve a great deal of the postoperative back-ache which is nearly always complained of. The same precaution should be taken about the head. A pillow should be placed under head of size corresponding to prominence of the shoulders.

If it is necessary to put him in any position that will violate any of the above precautions, do not maintain such position any longer than is absolutely necessary.

It is needless to say that the patient should not be "slopped up" in preparing the field of operation for obvious reasons.

As to the operation itself, will say very little except to call attention to a few precautions that will have a bearing on the postoperative comfort of the patient. It is needless to say that it should be done as rapidly as possible, consistent with thoroughness and with as little traumatism as possible to the tissues, exploring and handling the vital parts as little as possible.

See that sutures and ligatures are so placed that they will not include unnecessary tissue or pull in such a manner as to cause pain. In closing your incisions see that the parts are not in an unnatural position, because when they assume the natural position there may be such tension on the sutures as to cause constant pain. In closing abdominal incisions, do not make much tension on peritoneal sutures, to do so is unnecessary and will cause pain, the same is true of the skin sutures, but the sutures in the fascia may be and should be put in with a little more tension for this is the main layer in your closure and tension in here will not cause pain. Your duties are not ended with the closure of your wound. You should apply the first dressing at least. Do not

leave this to an inexperienced assistant or nurse. This first dressing is very important. It should be put on with a view to comfort, supporting the parts, securing the dressings to the wound and should be done well. The dressing badly put on often causes as much discomfort and pain as the operation itself.

We are now approaching the stage which we will lay particular stress upon, not at very great length however. It is in this stage that many surgeons otherwise brilliant and capable fail. Neglect of details in caring for the postoperative conditions has lost many patients. The postoperative treatment is just as essential and as important as the operative procedure, and often times the successful termination of a case depends largely, yes nearly altogether, upon the after treatment. In this stage you are pretty apt to need the family physician. Have him anyway for the chances are that the patient would rather see him than you. He will feel reassured after a visit from him.

The clothes which are usually wet, should be removed and dry ones substituted. Patient is put to bed, which has previously been warmed by hot water bottles. He should have an attendant constantly at the bedside until he regains consciousness. This is often not done, but it should be. The surgeon should see that it is done. Just as soon as patient has fully recovered consciousness the chances are that he will ask for water. Give him some, not all he wants of course, but let him have water. Of all the cruel and inhuman things connected with surgery, the cruelest is to refuse to give a patient famishing, almost dying with thirst, water. Think of the human organism as an ever active chemical laboratory, then think of the havoc introduced into the orderly process of this intricate organism by flooding the tissues with anesthetic poisons themselves, the manifold groups of changed secretions and cellular debris from this cause: now add the subtle poisons liberated or created by operative wounds and manipulations, then add to this baneful series by the stagnation of lymph flow caused by the deadly immobility of a supine posture. Thus having surcharged the tissues with abnormal secretions and imprisoned them more securely by the inhibition of muscular activity; add the final result of denying admittance to that well nigh universal solvent of effete abnormal secretion—water. Think of this, then wonder that the delicate human machine will survive such treatment. Take a well man and give him an anesthetic for a half, three-quarters or an hour or longer, put him to bed, don't allowed him to move and refuse him water, if you don't soon have a sick man, then miracles have not ceased. See that he gets water,

if you leave it to the nurse she won't give it to him.

Suppose he does vomit, the chances are he would have vomited anyway. If you have done your surgery well and applied your dressings properly, then vomiting as a rule will do no harm. It is not in the scope of this paper to give treatment, but it goes without saying that vomiting should be relieved as much and as soon as possible. We do not feel that water given in moderation will cause dilatation of the stomach, as some contend. This much we do know, that water is one of the greatest dilutents of poison in the system and it will help to get rid of the same by flushing out the kidneys and bowels and will also make the skin more active. Of course, there are cases, such as where the stomach is operated upon where anything by mouth is contraindicated, then water can be given by proctoclysis. This relieves thirst very successfully. Give him water, and plenty of it, —but you say you do. No, you don't. There are too many patients who have gone through this ordeal that will testify against you. It is needless to say that some opiate should be given to relieve pain, and something given to relieve extreme nervousness.

Then another thing that is not done, change of position. Nothing rests a tired, bed-fast person so much as change of position and nothing tires one so much as maintaining the same position for a great length of time. Try it yourself. Oh! but you say, they must lie flat of their backs on account of the wound. Again let me say that if you have done your surgery well, and applied your dressings properly, changing the position sufficiently to relieve discomfort will do no harm. It will do an infinite amount of good.

The Fowler or modified position is oftentimes a relief and many times beneficial. Where there is vomiting it may relieve it. It is beneficial in diffuse peritonitis, or to confine peritonitis to the pelvis. This position is essential in old or debilitated patients.

Again let us insist upon changing the position frequently. In abdominal cases a pillow under the knees will give great relief, as it relieves the tension on the abdominal muscles. When the patient is on the side a small pillow placed between the knees prevents discomfort and pain due to pressure of one knee against the other.

See that the nurse or attendant cares for the patient's hair, nails, mouth, teeth and any little details of the toilet that will make him comfortable.

Find out the habits of patients, and if consistent, let him as soon as possible go back to them. If he is a smoker, let him smoke. In other words don't subject the system to any

more shock by withholding anything that it is used to receiving. Let the patient as soon as possible, consistent with his condition, assume his normal life.

Let me repeat here, be prompt. When you tell a patient you will visit him at a certain time, do it if possible. Do your dressings at regular times if possible, for by so doing you will relieve your patient of a great deal of anxiety. Do not fail to have your assistant help if possible. It gives the patient confidence in him, so that if for any reason he should be called upon to care for the case, the patient will be better satisfied.

Be firm, but sympathetic. The surgeon who does not mix some sentiment with surgery, we feel, falls far short of fulfilling his commission.

Pay attention to details, do not fail to do the little things that relieve your patient.

We all know how the laity feels towards surgery, and justly so, and it is high time that the surgeons were doing something to dispel this feeling. The best way to do that is to take such care of your patient that he will be more comfortable.

Of course it is understood that all of the foregoing applies only to surgical cases in general and not to any special case or condition. There are many more things that could be said upon this subject, and probably there have been things mentioned that could have been left out, but if this paper causes any one of you to give more consideration to the comforts of a single patient, we will make no apologies for having taken up so much of your time.

DISCUSSION.

A. D. Willmoth: I believe the surgeon of today pays more attention to the after-treatment of his patients; that he more frequently personally supervises his cases after they leave the operating room than formerly. The after-treatment is often more important than the operation itself.

Perhaps nothing that the essayist referred to, or that has been advanced in medicine in the past few years, has done more to give relief to operated patients than the administration of water. However, most of the older nurses have had it so thoroughly instilled into them that they must not give these patients water, that it is very difficult to get them to do it now. Personally, for a number of years I have been instructing the nurse to give these patients plenty of water, and I do not recall a single case in which it did any harm.

The essayist did not mention lemonade. I have had several cases which I thought were benefited by the addition of a small amount of lemon juice to the water given the first two or three times after the operation.

As to the question of position, I recall when it was the custom to keep our patients flat on their backs in bed for from two to four days or longer, and I have not infrequently heard patients say that they did not mind the operation so much as they did going to bed afterwards. I think there are very few conditions which make it necessary to keep the patient absolutely in one position. Most of them can be allowed to lie in almost any position. I do not hesitate to turn laparotomy cases flat on their faces. This does two things; it rests the patient and it tends to pour the drainage out through the tubes which is what we want.

Personally, I believe that, as a rule, the less opium we give our patients, the better off they are. Of course, I realize that many patients have to have something to quiet them during the first few hours following the operation; but ordinarily the less opium we give, the less trouble we have from distension, in getting the bowels to move, and from disturbances of the secretions generally.

Curran Pope: Very few surgeons stop to reflect upon the psychic training to which many individuals must be subjected by the physician before they are prepared to encounter the surgeon for the first time, either for an examination or an operation. Sometimes this training amounts literally to an education, for there are many individuals who will balk the minute anything like an operative procedure is mentioned. Personally, I have considered that, when I have suggested operation to a patient, it devolves upon me to see that that patient's mental attitude towards the operation is made as favorable as possible, by telling him what to expect and what we hope to accomplish. Careful study of this subject will convince anyone that timidity, fear, worry and excitement exert a marked influence upon the abdominal viscera. Therefore, it is essential for the surgeon to keep his patient in good humor and good spirits, not only from the psychic standpoint, but also from the physical standpoint, because fear will result in lessening the tone of the musculature of the internal viscera.

As pointed out by the essayist, there is nothing that does more to cheer the patient than a small bunch of roses or other flowers in the operating room. It lends a touch of color, and to the patient it is literally an oasis in the desert. If our hospitals would try to make the surroundings of their patients more pleasant and cheerful, it would help the surgeons in many ways. Furthermore, I believe that, if the surgeons, as a rule, would pay a little more attention to the psychic and emotional sides of their patients after operation, they would be sowing seed that would fall upon rich soil and bear a full harvest.

G. S. Hanes: I do not believe that the an-

noying pains in the hips and back, of which operated patients so frequently complain, are entirely due to the position of the patient while on the operating table, but are rather the result of lying in bed in one position for long periods of time.

My personal experience leads me to believe that there is nothing more grateful to the average patient after an operation than lemonade and orange juice, and I think these are frequently the means of allaying nausea and preventing vomiting.

So far as the anesthetic is concerned, I believe each case is a law unto itself: we cannot lay down any hard and fast rule that will be applicable to all cases. Every patient deserves from the surgeon and physician the most careful individual attention and the best after-treatment of which they are capable. We must bear in mind that it is a very trying ordeal for the patient, and it is up to us to do everything possible for their comfort.

John R. Wathen: I believe we are having much less trouble in our post-operative work in the present day than we formerly had and this is due to several things. First, more careful preparation and after-treatment. Second, we have learned that gas-pains can be almost entirely eliminated by giving a large dose of castor oil prior to the operation, and washing out the stomach after operation—sometimes while the patient is still on the table, before being put to bed.

Another factor which influences these gas-pains is the anoci-association method of anesthesia. Where the operative field is anesthetized, it will undoubtedly tend to prevent the formation of gas, and will relieve the pain in the abdominal wound.

I am opposed to the routine administration of eserine. While this drug has long been our sheet anchor for inducing peristalsis, we have to-day a better agent in pituitary extract which accomplishes the same results with none of the bad effects.

As to the use of water, I agree with Dr. Hanes that each case is a law unto itself. In many cases, particularly where gastric surgery is done, it would be very unwise to administer large quantities of water, dilating the stomach and running the risk of tearing loose the delicate stitches. Of course, the after-treatment will depend entirely upon the operative procedure that has been carried out.

F. T. Fort: I am not entirely in accord with the essayist in regard to giving large quantities of water in all cases.

I presume the essayist does not mean to convey the idea that he would give large quantities of water in all operated cases, because in cases operated upon in the upper quadrant of the abdomen water should be withheld as much as possible in order to keep down nausea. Some op-

erators give hypodermoclysis during the operation, believing that this tends to prevent the thirst which usually makes its appearance immediately following operation. A few years ago Murphy originated proctoclysis which has the same effect.

C. H. Harris: I wish to defend the family physician; he is not always "meddlesome," and is often more fully acquainted with the idiosyncrasies and peculiarities of the patient than is the surgeon. Therefore, I do not believe the surgeon is warranted in relegating the family practitioner entirely to the background. It is up to the physician to make the diagnosis and, in most instances to select the surgeon, and after the operation, if the case does not turn out all right, the physician gets most of the blame. It is this state of affairs that has prompted many physicians to attempt to do their own surgery.

Lee Kahn: One condition that is coming to be recognized as a factor in post-operative cases is acidosis. It has been observed by a number of investigators that in many of these cases the patient, just a few moments before death occurs, manifests an acidity of the blood. In other words, it is now recognized that a condition of acidosis may follow anesthesia, and it does not seem to make any difference what form of anesthesia is used. This condition has been observed to manifest itself shortly after the administration of the anesthesia, and also after a prolonged period of starvation. It is claimed by authorities who have given this subject most careful thought, that the danger of acidosis or acidemia is minimized by eliminating meats from the diet for several days prior to operation, and increasing the carbohydrates. Some authorities in this country advocate the administration, as soon as the patient recovers from the anesthetic, of a fairly large dose of sodium bicarbonate, and glucose by the mouth, per rectum, or intravenously.

A mistake that is very frequently made is allowing these patients to get up too quickly. The surgeon who allows his patient to get out of bed and walk within three or four days after an abdominal operation (which is the boast of one surgeon I know of) is certainly taking a long chance.

A. C. L. Percefull, (Closing): As to the use of water, it makes no difference whether it is given in the form of lemonade, orangeade, or what-not in cases where it is permissible. I stated in the paper that water should be withheld in cases where the nature of the operation makes it contraindicated.

As to the position of the patient on the operating table causing back and hip pains, I believe that any patient who has lain for an hour or two on the average operating table will have pains in the back to a greater or less degree. I do not see any reason why the operating table should

not be padded so as to make it comfortable and obviate this factor. A small pillow placed under the patient's back will serve to preserve the natural curvature of the body and tend to lessen the post-operative back pains.

As to vomiting, I believe that, in many cases, the administration of water will tend to lessen it, because it helps to get rid of the material in the stomach that produces the vomiting.

As to the family physician being "meddlesome," this may be true in some instances but I believe that, as a rule, if the surgeon would treat the doctor's suggestions with greater courtesy and let him feel that he is still needed in the case, it would result in a greater degree of satisfaction to all concerned.

BACKACHE.*

By S. P. GARRISON, Bellevue.

About the time that I was to decide upon a subject for a paper to be read before this society, I had several patients come to the office, with their chief complaint of pain in the back, or backache, and each from an apparently different cause, so I thought a brief review of some of the more common causes of this condition might not be amiss.

While pain in the back is an exceedingly common symptom, still the underlying causes of that pain are not always easy to determine. In many cases the cause is self-evident, but in others it can only be found after a very thorough and careful study of the case.

About 25 per cent of cases of backache are traumatic.

The symptom may vary from an occasional tired or aching feeling noticed only after exertion, to a constant severe ache or pain which puts the patient to bed and causes considerable suffering.

Pain may be divided into two general classes: Subjective, or that sometimes called functional pain, in which our only evidence is the statement of the patient and no lesion causing the trouble can be determined; or objective pain where we have evidence of disease likely to cause it.

So, when a patient presents himself to us complaining of backache, we must ask ourselves the question: is there a lesion causing the trouble, is it functional or organic? Of course, strictly speaking, no ache or pain can be truly functional, or the neurons would not manifest pain, but for sake of convenience we sometimes call the cases functional where we can detect no underlying cause for the trouble.

These functional cases have some characteristics which are not found in organic cases,

for instance, they occur most commonly in patients suffering from hysteria, neurasthenia, malnutrition or the various toxic blood conditions. Patients suffering from anaemia, malaria, syphilis or diabetes are frequently sufferers from this kind of pain, due to their lowered resistance to irritants.

Subjective pains are not usually limited to a definite area, but are apt to be more diffused and shifting in character, nor are they accompanied by loss of sensation, nor by motor, reflex or vasomotor defects.

If, therefore, in any given case we can exclude hysteria, neurasthenia and toxic conditions, we must search for some definite lesion causing the pain.

Defective or faulty posture by putting undue strain on certain groups of muscles and ligaments is an important and frequent cause of backache. Any severe or unusual exercise bringing into play the muscles of the back, will be a cause of backache in a person unaccustomed to such exercise. In these cases, the history immediately reveals the cause of the trouble.

Another cause not always so easy to determine, is flat-foot, in quite a good percent. of cases this will produce a varying amount of pain in the back.

Rheumatoid arthritis or arthritis deformans is a disease which must be considered. In rare cases it may occur in the spinal joints alone, but if it does it will soon cause more or less fixity of the joint with swelling or deformity.

Localized periostitis of the vertebral column, while a possible cause, is rather unusual unless it follows a trauma or is secondary to other bone lesions.

Vertebral caries or tuberculosis of the spine is of slow onset and accompanied by more or less rigidity, fever and some evidence of tuberculosis elsewhere.

Lumbago is a rather frequent cause, it occurs in the lumbar region and is frequently the result of a strain or traumatism of some kind. In this class of cases the pain is usually unilateral and localized in the quadratus lumborum muscle and pressure over the origin or insertion of the muscle will reveal some local tenderness.

Acute articular rheumatism affecting only one vertebral articulation must be exceedingly rare as it always has a tendency to affect the larger joints and more than one, with fever and other evidence of an acute inflammation.

Neuralgia of the cutaneous nerves may sometimes cause pain, this usually precedes or accompanies an attack of herpes and, of course, is not very frequent.

*Read before the Jefferson County Medical Society.

Some conditions of the cord or its membranes which may be a cause of pain are:

Pachymeningitis spinalis, but the history together with muscular wasting, which this disease causes, will show whether or not it is a factor.

Myelitis usually causes some motor weakness or sensory disturbance below the lesion close to reflexes.

A spinal tumor, if of any duration, would soon cause symptoms of a myelitis.

A patient with locomotor ataxia, will sometimes complain of pain in the back, but in this case the other symptoms of the disease, as loss of knee-jerks, Argyle Robertson pupil, etc., should be present.

Leptomeningitis may accompany cerebro-spinal meningitis or any of the acute diseases and usually starts with fever and chills and other symptoms of an acute infection. In the chronic form the most frequent cause is syphilis which may form a gummatous type of inflammation. A careful history and various tests for syphilis should be used to determine whether or not this is a factor.

Aside from the local conditions of the vertebrae or cord, we have various other conditions which may reflexly cause backache.

One of these and a very common one is a loaded colon and it is remarkable how many cases coming to us with their diagnosis of kidney trouble already made, will recover completely and immediately after a thorough cleansing of the bowels.

Ulcer of the stomach may cause a referred pain in the back.

Various diseases of the stomach, or subphrenic or perinephritic abscess may cause backache.

Certain causes may act on certain areas of the spine, as a thoracic aneurism, or enlarged bronchial glands or tumor of post-mediastinum will cause pain over the dorsal spine, while cases of nephritis or lumbar abscess is more apt to cause pain over the lumbar region.

Backache is one of the most common disorders of which women complain and varies from a mild intermittent ache to one which feels as though their back was breaking in two.

Backache is not in itself characteristic of any special form of pelvic trouble but may be due to a variety of causes.

Pelvic tumors may cause dragging on the uterine ligaments. Retrodisplacements, especially if bound down by adhesions, is a frequent cause of the trouble.

Sacro-iliac luxation or any inflammatory mass pressing on the sacral nerves may be a cause.

While it is true that backache in women

may be due to some pelvic disorder, still that is not always the case and I have found that women with backache, have made their own diagnosis of female trouble just about as often as men have of kidney trouble.

Let us not treat too lightly the cases of backache which come to our attention but make a careful study of the case and we may in some instances be able to ward off or abort some serious organic trouble.

WHAT THE PHYSICIAN OWES THE PUBLIC.*

By W. J. GERDING, Newport.

The title of this paper, while hackneyed, conveys more succinctly what I have to say, than any other title that I know of.

This subject has been brought before medical societies with the regularity of the proverbial clock; this fact, however, should not make it commonplace, but on the other hand, by constantly bearing in mind our duties to the public, and also the fact that those duties are closely linked with preventive medicine, no subject, no matter how high sounding the title, could hardly be of more importance.

What do we owe the public? As custodian of the community's health, we must not alone be satisfied with the proper and scientific care of the sick and injured, but should devote more time and energy to the conservation of the health of our brethren. Surgery as well as medicine record many beautiful results; in fact the acme of perfection has seemingly been reached.

However gratifying these things are, yet, no doubt, many of those diseases or conditions might have been prevented, thereby obviating the necessity for spectacular surgical operations. By no means do I deery surgical or other measures to relieve or cure these unfortunates; indeed, at the present time no other course is open.

The proper prevention or the complete cure of venereal diseases before marriage will prevent many future operations for pus-tubes and also much invalidism. The proper care of the teeth will not alone save them, but also the health of the individual, for we now know that many diseases can be attributed to ulcerated teeth.

Adenoids should be removed in every instance, for they have no more right in the naso-pharynx than the weeds in our flower gardens. The tonsils should be inspected and properly treated. I do not advise the indiscriminate removal of all enlarged tonsils for

*Read before the Campbell-Kenton County Medical Society.

many of them under appropriate treatment such as the removal of adenoid tissue and the proper attention to mouth toilet, could be conserved to perform the function nature intended.

We all know how these conditions predispose, if neglected, to more serious trouble later, not alone during childhood but in adult life. Many cases of tuberculosis can be traced to the interference to nose breathing and the consequent inhalation through the mouth of germ-laden air. We also know from late investigations that tuberculosis is usually contracted during childhood, and therefore the predisposing causes should be looked for and treated. I need hardly remind you as physicians how much suffering would thus be prevented.

Our State Board of Health tells us that infant mortality could be reduced to a negligible quantity by making proper use of the known means to prevent those diseases causing death.

Now, since we all know and agree that diseases can be prevented in a great majority of instances, we owe the public this knowledge and it should therefore be imparted to them so that they can make intelligent use of same.

Before we can go before the public and talk preventive medicine, we have even a much greater problem to solve. The physician himself must be educated before he can successfully impart information to the laity. Imagine a physician standing before a gathering of people talking preventive medicine—how to conserve life, etc., and he at the same time advising the young mother how, or assisting her to murder her unborn child without disaster so that both may keep out of the penitentiary! Imagine again, a physician lecturing to the public, who himself does not believe in one of the greatest blessings of mankind, namely: vaccination!

Imagine others, who do not believe in the use of autitoxin; only using it when prevailed upon by the family or neighbors when the child is in extremis; and after death saying to the family, "I told you that there was nothing in these new-fangled drugs!" I personally know of some such in our city.

Imagine others, who never sterilize their hands in doing obstetrical work; nor sterilize their clinical thermometers in ordinary daily work!

Imagine again, others who, because they never saw a germ under the microscope, believe that the germ theory is a fad!

Imagine again, others who never had a lacerated perineum in their twenty years of obstetric practice, trying to teach preventive medicine!

We must be practical men ourselves; we

must be endowed with at least the ordinary allowance of common sense before we can be considered competent to educate others.

The next question is: When, and how are we to proceed, and what can we expect from such a propaganda?

In the first place, proper men are selected to do the work by the county society. The school is the proper place to preach health doctrine as the children are more impressionable and will therefore absorb more than the same number of grown-ups. The adult is usually set in his ways and in the majority of cases new ideas find in him no ready acceptance. Again, public audiences of this kind are usually made up of those who are fairly well informed already by popular reading, etc., while the class that is mostly in need of such information seldom attend plain lectures. It therefore resolves itself to the school-room lecture.

A regular systematized course could be provided, where, say one lecture a month could be given. The eighth grade pupils should receive these lectures. This grade is selected because the children are now old enough to appreciate health talks, and also because after this grade has been reached many of the children leave school and are thus deprived of this extremely important knowledge. If this plan were followed by an entertaining lecturer, one capable of illustrating his talks, I am sure that in a few years much good would accrue.

To accomplish anything of permanent value the lectures must not be given sporadically, but should be continued throughout the whole school year. This same can be given in all the private schools as I have already given a few of such by invitation, and they were enthusiastically received.

What should be taught the children? We must begin with the infant; discuss its food and water supply and reasons for attaching so much importance to same. Vaccination should then be taken up from the time of its discovery, human and bovine virus, and why the latter is now to be preferred. By quoting statistics a more lasting impression can be made.

The infectious diseases should now be discussed—how contracted, how prevented, complications and sequelae, as well as management of convalescence, which as you all know is the most important period.

Next, we might talk on germ life, explaining the different kinds of germs such as the harmless and useful ones, and the kinds that cause disease. Illustrate with microscope and drawings. Here we might also tell how germs propagate, give life history, how disseminated, and how destroyed. The abominable

feather duster and the old house broom should be scored. Sweeping and the stirring up of dust while children are in the room should be condemned in the strongest language at our command.

We are now ready for a talk on the home; the necessity of sunlight and fresh air in our living and sleeping rooms. The importance of oxygen in the economy and the dangers of carbonic oxide should be explained. A talk on germicides and disinfectants would now be in order.

The importance of the proper care of the teeth, mouth and throat should be impressed upon the child. The child should be told never to despise a slightly sore throat as acute nephritis may follow even as it follows diphtheria and scarlet fever.

The cause of mouth-breathing should be gone into; if there be any obstruction, it should be immediately attended to. This is due in the great majority of cases to adenoids.

The children should be told what adenoids are, that they have no function and were never intended by nature to be a part of the human economy. Enlarged tonsils, by this I mean persistently enlarged, are usually hot-beds where germs hatch and thrive. This should be explained to the children so that they might reason for themselves that such nests must be gotten rid of.

Further care of the body: baths, their frequency and reasons for same. Body and bed vermin believed to transmit disease and how to destroy same. How flies breed and how they are known to carry germs from one point to another. We might also impress upon the children that plenty of sleep in a good atmosphere is essential to acquire and retain good health. We must have regular sleeping hours. Explain to the children, how many young people pay no attention to this until victims of their folly, when no amount of sleep will cure them of the inevitable consumption.

Care of the stomach should now be discussed. Effects of improperly cooked food, as well as highly seasoned and artificial food as offered to-day. The quantity and kind of food for the growing child should not be lightly gone over. The alcohol problem which we must admit is a very important one, should by all means be taken up. Alcohol should not be used as a beverage; while its former wide application as a medicine seems to be narrowing. Even those of us who feel that the moderate and sane use of alcoholic beverages is harmless, cannot deny that many a brilliant career has been cut short as a result of this harmless beverage.

An alcoholic stomach and liver should be shown on the board, as also the kidney of an

alcoholic or a good feeder of good things in unreasonable quantities and unreasonable hours. The many diseases due to alcohol either directly or indirectly should be named, such as tuberculosis, cirrhosis of the liver, nephritis, neuritis, etc. The ubiquitous disease, consumption, should not be slighted in the least. Many lectures could be given alone on this scourge of humanity and not one-hundredth part of the truth be told. While we have no specific it seems that we must be content to spend most of our energy on the causes and prevention of this terrible disease. Expectoration anywhere excepting into proper receptacles should be considered a crime. I always tell my patients that I would rather see dynamite caps strewn around the streets, for we then would at least be able to recognize them by their size and color, and thus be able to side-step them with a little care. This we can not do with the little germs that lurk in the wind-strewn dust made up of dried sputum of our good but careless tuberculous friends. This same holds good of the sputum and other excrement deposited upon the side-walk by many who think themselves healthy, for we as physicians know that all nasal and throat discharges contain a regular menagerie of all the commoner and rarer specimens of microscopic life.

I would also strongly impress upon the minds of the children the importance of the early recognition and the proper treatment of the slightest deviation from the normal health; how diseases and conditions detected early can be controlled just as a small fire is easier to extinguish. This work should be left for the insurance companies who have the dear public's interest to heart only in so far as it concerns its own business interests. With them it is only a cold business proposition but with the profession of purely humanitarian consideration.

A regular periodic examination of the body is even of greater importance than the regular periodic examination of only a small part of the body as urged by the dental profession. This then would compensate us to some extent for what we lose at the other end, if some of us might feel that with healthier people there would be less for the doctor to do.

While in the last few years much good has been done by the regularly appointed school inspectors, still much more remains to be done to get the maximum good out of this noble work. Merely going into the school-room and hastily examining the children, advising them or their parents of some physical defect, does not do all that was hoped for. To my personal knowledge, I know of many instances where the child was sent home with a card stating that the teeth were bad and needed at-

tention, or that it had adenoids or bad tonsils which required immediate looking after, where nothing at all was done simply because the parents in their ignorance could not agree with the doctor that such was necessary. If the parents or guardian had been properly instructed along the lines suggested in my paper, school inspectors would hardly be necessary as the parents would have seen to it that even before the child had entered upon his school career, his nasal obstruction, his diseased tonsils, or bad teeth would have received proper attention.

I am sure all of you who have practiced medicine for a few years know how in many instances your kindly advice fell upon barren ground, and how in many other instances proper treatment was given too late even to save the life of the sick child.

Some of you might say that by this method we would be actually teaching medicine to the laity and in the end laymen as well as the physicians will suffer. This is not true. On the other hand I am sure we would have much more to do and besides the work would be pleasanter for them we would be dealing with the well and not the sick.

THE COMMONER DISEASES OF THE KIDNEY.*

By J. W. GERDING, Newport.

A glance over the mortality statistics will convince one, that renal affections, directly or indirectly, cause a not inconsiderable loss of our population. While it is true that tuberculosis and pneumonia head the list, we, as physicians know fully well, that even many of those have had one form or other of kidney disease, before the disease causing death had seriously affected the patient. Again, there are many in whom the disease had not been recognized.

My experience in the pathological laboratory leads me to believe that perfectly healthy kidneys in the adult are extremely rare. All of the subjects examined, even excluding those that have died of some acute condition in which we would expect to find an oedema or swelling of the parenchyma, had one form or other of kidney disease. It is the rarest thing to find a microscopically healthy kidney in an adult, even though the subject met with an accidental death; therefore if one wishes to prepare a normal section of kidney tissue, a calf or sheep kidney will have to be procured.

The fact that a lesion of the kidney may have wrought considerable havoc long before the victim is aware of it, and that by the time

the diagnosis is made, it is past the period when much can be done to stop its ravages, should encourage us to look for evidences of the disease, so as to recognize it in its incipency, or even in the stage immediately preceding, which I will call the "pre-nephritic" stage. Why wait until we have a urine loaded with albumen, patient with arteries so stiff as to obliterate the radial pulse, anemia and dropsy, when nothing but palliative measures can be adopted? Is it a wonder that the patient has little faith in our ability to cure disease, when all that we can offer the unfortunate is little relief and less encouragement?

Now, how are we to recognize a lesion of the kidney before there are any subjective symptoms? Of course to do this we must have a thorough knowledge of the various conditions that predispose to or complicate these affections. To treat tuberculosis in the sense of really doing something for the unfortunate, we must recognize it in the so-called "pre-tubercular" stage. This applies also to kidney affections as forcibly as to any other chronic or so-called incurable condition. We must not wait until the degenerative changes have so far incapacitated the kidney, that to think of restoring the altered tissue would be preposterous.

While it is true that we are provided with two kidneys, and with perhaps, more kidney parenchyma than really needed in health, so as to provide for emergencies such as the loss of part or a whole kidney by disease or by operation; there is no reason however, why we should rest satisfied and depend upon this reserve capacity, however salutary when needed.

PRE-NEPHRITIC STAGE.

Long continued hypertension of the blood-vessels is known to be followed by arterio-sclerosis; and as arterio-sclerosis is nearly always followed by degenerative changes in the kidney as well as in other organs, we can readily see how many of the conditions that bring about an increase in blood-pressure, may also precede a nephritis. In view of this fact, I think we are safe to cede a nephritis. In view of this fact, I think we are safe to consider this condition, in a man well on in middle life with grave business responsibilities, with too little physical exercise, and extremely fond of good things to eat and drink; or maybe in a person whose work requires much exposure and great physical strain, and along with this the not too temperate use of alcoholics, as belonging to the so-called "pre-nephritic" stage.

I do not wish to be understood as saying that all cases of hypertension will necessarily be followed by nephritis, or that nephritis is

*Read before the Campbell-Kenton County Medical Society.

never the cause of the high tension; it is well, however, to give all parties coming under our care with a somewhat heightened blood-pressure, the benefit of some extra care and solicitude.

We are all familiar with the many other conditions that predispose to one or the other form of nephritis, such as the infectious diseases, certain toxic substances taken into the system, occupation where the patient is exposed to damp or wet, excessive or intemperate use of food or drink, violent exercise or very hard work, so I need not more than mention them.

The "pre-nephritic" stage may be short or long as the case may be, so it behooves us to exert our efforts to check what is impending, which can be done by changing the patient's habits, occupation, climate, and by awakening in him a proper appreciation of his true condition.

While theoretically it sounds well to state that in the so-called "pre-nephritic" stage this or that advice should be given, practically however, the majority of cases will have gone into the stage where only palliative measures can be adopted, before we get to see them. This statement holds good as regards the early or "pre-tubercular" stage of tuberculosis as well. It is high time to educate the layman, even though apparently well, that to be on the safe side, it is imperative that he be examined at regular intervals, and that by so doing we will be able to detect, ward off, or possibly check many of the conditions that would otherwise go on and become serious. We should use greater effort to get our patient to come for regular periodic examinations than we have heretofore, as this is the only rational way to render real service, and for which, a commensurate fee would be exacted.

The time is long since passed, when it was thought to be the better part of wisdom to withhold from the patient the fact, that he has a chronic disease, such as tuberculosis, diabetes, nephritis, etc. To expect results, to get the proper cooperation of the patient, it is not alone necessary to inform him of his true condition, but also the seriousness and gravity of same, danger to others, etc.

From personal experience, I find that the majority of people, while of course not elated at hearing the truth, nevertheless appreciate your conduct, because they are thus in a better position to receive the proper advice and treatment.

While the foregoing remarks apply mostly to the recognition of those forms of kidney lesions that come on insidiously and end in death sooner or later if unchecked or untreated, I will, however, include in the discussion, the various acute and subacute con-

ditions, as they not infrequently lead to a chronic degeneration.

I have up to the present time refrained from the use of the term "Bright's disease," and will ignore same throughout my discussion. The term is certainly confusing, not alone to the laity, but particularly so to the physician, as it is frequently loosely applied; often used to designate any form of kidney disease. Indeed, I think it more proper to describe the different forms according to the pathological change that has taken place.

I may be pardoned if I should dwell at length and seemingly place too much emphasis on the pathology and the microscopic picture of the various lesions in describing the different forms of kidney affections, with perhaps too little on the therapy, but my excuse for doing thus, is, it is known to be a positive fact that all conceptions of disease not founded upon accurate knowledge of the morbid anatomical changes in the tissues, must necessarily be very imperfect.

If we understand the pathology; if we have a mind-picture of the pathological changes in the different forms of kidney disease, we can rest assured that our conception of the disease, as well as the management of the case, will be more intelligent. The successful therapist is he who knows his pathology; the treatment and management will then be simple and more rational.

It is absolutely impossible to make or formulate a practical working classification of the chronic types of kidney disease, and for this reason it is more necessary to have a perfect knowledge of the many different pathological changes to which the kidneys are subject. Nor can we always clinically make a sharp distinction between the different chronic types of kidney disease as parenchymatous, interstitial, waxy, etc., as they frequently coexist in the same subject. We scarcely ever see a well marked so-called parenchymatous nephritis, without more or less interstitial change; while in the contracted kidney, parenchymatous changes are always present. We cannot always say that in one case the parenchyma was the first to be involved; or in another, that the interstitial tissue was the beginning of the trouble. In other cases waxy degeneration accompanies the parenchymatous and interstitial changes.

CLOUDY SWELLING.

In all acute fevers, we have more or less cloudy swelling of the cells of the parenchyma. It is well to remember this, so as to be on our guard and keep a watchful eye on the kidney secretions during convalescence. This I am safe to say, we neglect in a great many cases. Let us resolve in the future, to examine the urine of our convalescents often,

impressing them with the importance of same, and thus prevent a goodly number of later-day nephritics.

This condition may result from the action of the bacterial toxins of the various infections, as well as of vegetable and mineral poisons. The poison or toxin acts upon the cell and interferes with its metabolism. Albuminous granules accumulate in the cytoplasm, and are of various sizes and shapes. Remember, this occurs not only in the cells of the uriniferous tubules, but in many other cells of the body.

The cell degeneration as I stated before, is often, if not always, associated with the infectious diseases. Under the microscope the cells are seen to be swollen and more opaque than normal. The nuclei are not so prominent when the granules are large and numerous. It is well to remember that this condition of granular degeneration or cloudy swelling as it is more commonly called, may clear up, that is, regeneration may take place, and the kidney may once more become normal.

It is also well to remember, that while the cells are in this condition, any indiscretion may be followed by a more serious affection of the kidneys. If we examine the urine of a patient with acute granular degeneration of the kidney or cloudy swelling, we will find a slight amount of albumen, with possibly hyaline or epithelial casts.

The treatment of this condition will suggest itself, provided we have a mind-picture of the change that has taken place in the kidney. Rest, avoidance of exposure, non-irritating food and drink. The patient should be encouraged to drink plenty of water and skimmed milk. Medicines are usually unnecessary.

ACUTE NEPHRITIS.

In acute nephritis, we have in mild cases, no appreciable macroscopic alteration of the kidney. In the more severe forms, the kidney is swollen, of a dark red color, while the cut section may appear bloody. In some cases however, the surface is pale and mottled, while the pyramids have a deep red color.

Under the microscope we see glomerular changes. The cells lining the membrane are swollen and may proliferate. Leucocytes and red blood cells are seen in the cavity. Often a hyaline degeneration of the capillaries of the tuft is seen. The epithelium lining, the tubules are swollen, while hyaline and fatty degeneration may take place. Altered cells, leucocytes, and red blood corpuscles accumulate in the convoluted tubules, which cause the organ to swell. Besides those changes the interstitial tissue changes. Here we have a serious exudate mixed with leucocytes and

red corpuscles. A round cell infiltration may be seen about the capsules and between the tubules. If the changes are more marked in the interstitial tissue, we sometimes speak of it as acute interstitial nephritis; if in the glomerule, the glomerular form. On the other hand if the change is general, we call it acute diffuse nephritis. This finer distinction can only rarely be made except under the microscope.

CLINICAL DIAGNOSIS.

The diagnosis cannot always be made from the urine alone, as simple cloudy swelling may produce the same condition of the urine as a mild nephritis. The fact that albumen and casts have been found does not in itself mean acute nephritis. However, if we find albumen and casts, especially blood and epithelial in a scanty urine, highly colored, accompanied by anasarca, following a cold or one of the infectious diseases particularly scarlet fever, we then have an acute nephritis.

CHRONIC NEPHRITIS: PARENCHYMATOUS TYPE.

As previously mentioned, the milder forms of kidney diseases are not infrequently followed by a graver condition. In those chronic types where the symptomatology as well as the history of the case show that the parenchymatous structure is principally involved, we speak of it as chronic nephritis, parenchymatous type; and of this form we see cases of all degrees of severity, or in other words, some cases scarcely present any symptom sufficiently clear to diagnose it as one of nephritis. Here also as in the acute variety, several distinctive forms have been described, but for the present discussion no such finer subdivision will be made.

As previously mentioned the parenchyma is chiefly affected. The interstitial tissue is also involved, though in a lesser degree. The cells lining the tubules become distorted, some flat, some dilated, others swollen and granular. The glomeruli also show decided changes. They are large in many instances while the capsules also show thickening. In other instances they become entirely destroyed. The epithelium in the convoluted tubules show degenerative changes while the arteries show thickening.

CLINICAL DIAGNOSIS.

The symptoms vary according to the type and other etiological factors. They may resemble those of an acute nephritis, although in a modified form, especially if the patient had previously suffered an acute attack. Often, however, the disease comes on insiduously in a patient who was seemingly in good health.

The urine in this type varies, so much so in many cases, that it is extremely difficult to

make a diagnosis from the urine examination alone. Albumen varies from a trace to six per cent. The urine is turbid and of a dirty yellow color. As a rule it is diminished in quantity. In the earlier stages the specific gravity is high but later in the disease, low. The sediment under the microscope will show tube casts of various sizes; hyaline, large and small, epithelial, granular and fatty. Leucocytes may be abundant. Red blood cells are occasionally seen.

Here, again, the symptom complex must be considered as the urinary findings are notoriously untrustworthy in not a few cases. The severer forms are always easily recognized, while the milder and irregular forms may escape detection. Like many chronic diseases we very often find it complicated with some other trouble, and therefore the clinical manifestations may be varied and manifold, while in not a few cases we scarcely have any symptoms presenting. We are all familiar with the symptoms of an advanced nephritis with broken compensation, so they need not here be repeated.

CHRONIC NEPHRITIS: INTERSTITIAL TYPE.

In this type, as the name implies, the interstitial tissues are mostly concerned, or in other words, there has been an extra deposit of new-formed fibrous tissue to such an extent that the parenchyma, due to the encroachment, cannot well perform its function; while the same process affects the glomeruli as well as the renal vascular system. We see under the microscope marked degenerative changes in the cells lining the tubules, while many of them are actually devoid of cells. Early cases show round celled infiltration between the tubules and around the glomeruli.

Bowman's capsules later become thickened, often to the extent of crowding the vascular tuft, and thus causing atrophy and hyaline degeneration. The arterial coats show the usual sclerotic change. It is claimed by the majority of observers that the changes in the secreting tissues are secondary to the interstitial change.

CLINICAL DIAGNOSIS.

In this form the urine is oftener increased in quantity, and consequently an increased thirst. Very often the malady has progressed to a serious stage even before the patient feels that there is anything wrong with him. In this form, we find that the symptoms are extremely varied and complex. We may find albumen in some cases, while in many others, entirely absent. This, however, varies with the food and exercise. High blood pressure is a persistent symptom; in some cases may reach 250 or 300.

Hypertrophy of the left heart is constant.

Hyaline and granular casts are present in the urine.

CHRONIC NEPHRITIS: MIXED TYPE.

In some forms of chronic nephritis where there are marked degenerative changes in the parenchymatous structures as well as an intense growth of fibrous tissue between the tubules and glomeruli, while usually classed as an interstitial nephritis, may be more properly classed as a mixed type or a diffuse form. Earlier in the disease when the parenchymatous degeneration is more marked, the kidney may be larger than normal, but later, as the interstitial tissue changes become more marked, the kidney contracts, and we then get the typical "atrophied kidney."

Under the microscope we see portions of the kidney entirely converted into new fibrous tissue, in fact the structural changes are so great that to recognize it as kidney tissue, would be almost impossible. Other portions show marked degeneration of the cells of the tubules as well as the glomeruli. Again, other areas may appear close to normal.

CLINICAL DIAGNOSIS.

The clinical manifestations of this type are varied, but resemble those mentioned under the interstitial variety, so they need not be further discussed.

TREATMENT OF THE DIFFERENT CHRONIC TYPES.

In the management of chronic nephritis we must constantly have before our mind a picture of the structural changes in the kidney. With this picture before us, we can see the futility of administering drugs supposed to have a curative effect—effect or power to reproduce destroyed parenchymatous tissue, or possibly to cause thinning of the thickened blood vessels and glomerular capsules—to replace the new-formed fibrous tissue with new glomeruli and tubules. This can never be accomplished. We may however, by judicious management, skill and knowledge, plus the hearty and honest cooperation of the patient, bring about compensation, the reserve kidney parenchyma brought into use, and thus in many instances life prolonged for a goodly number of years. The earlier the treatment is begun the better the final result will be. Of diet and drugs I shall not speak, as each case is a law unto itself. Very few will require medicines after the proper adjustment of diet, environment, occupation, habits, climate, etc.

It has always been a mystery to me, why insurance companies, while seemingly careful in every other respect, fail to demand a closer scrutiny of the vascular and urinary systems instead of delving into the history of applicant's grandparents, uncles, aunts, etc. The usual urine test for albumen, sugar and

specific gravity, is to my mind a farce, even if performed with a greater degree of skill than is usually practiced by most examiners. The urine should be tested more than once, supplemented with, what I think is of much more importance, the microscopical examination of the sediment, and a careful determination of the blood-pressure. These to my mind will do more to discover deviations from the normal than all the interrogation, usually practiced by the so-called careful investigator.

SUMMARY.

1st. In order to be in a better position to manage or control a disease, it must be detected at the earliest possible moment or in the stage immediately preceding, often referred to by the laity and even physicians as "simply run down in health."

2nd. To be able to detect conditions in the "pre-active" stage, the laity should be taught to present themselves to their family physician at stated intervals, even though apparently well.

3rd. The physician must make a thorough examination and be able to detect and interpret symptoms, which to the layman mean little, but to him, a trained observer, the signal for energetic action.

4th. To study the microscopical pathology so as to understand what is really going on in a diseased organ or tissue.

5th. To bear this picture in mind and thus have a better appreciation of the condition, while the management and treatment will be rational and scientific rather than empiric.

6th. It is suggested that the meaningless term "Bright's disease" be relegated to obscurity, as confusion often arises, even in the making up of mortality statistics.

7th. The urine examination alone, without the microscopic test and blood-pressure reading, is not always sufficiently significant.

8th. That from our microscopical studies we know that portions of the kidney may be totally destroyed and that by judicious management the healthier portion may carry on the function in a fairly satisfactory manner for a long period.

9th. That medicines have no direct influence upon the destroyed parenchyma, but only of service to bring about compensation.

The Initial Period in Leishmaniosis.—The initial stage of leishmaniosis in mice and dogs may be of but a few days' duration. Its length depends on the quantity of the injected parasites, on the age of the infected animal, and possibly on whether the virus was obtained from man or dogs.

MEDICAL INSPECTION OF SCHOOLS.*

By EDWARD A. NORTH, Newport.

The tendency of the times, among individuals as well as organizations, is to become prominent, a shining light as it were, as a benefactor of humanity.

While we have an individuality and in a sense are independent, yet after all we are simply units in a great community—constantly mingling together, possessing numerous associations and mutual interdependence therefore, being a part of one great whole, it is perfectly logical for the units to seek to further the interests of the whole.

In keeping with the above tendency and in the light of recent knowledge the medical profession bears a somewhat different relation to the community than formerly—in that it now seeks to remove the cause of disease before it has attacked its victim and on the other hand strengthen the resisting powers of the human kind. From a reflective viewpoint it is possible that the profession exhibits its fullest beauty in the attitude thus assumed, although in accomplishing such ends it gives as a sacrifice its means of livelihood—unless it be that after we have reached a certain degree of perfection in evolving the perfect man, our method of compensation be changed, or the general masses become better producers, consequently better able to pay larger fees. In pursuance of its recent accepted duties, the profession has energetically advocated the medical inspection of schools.

It is claimed that Greece, when in her prime, recognized the mental significance of a healthy body and accordingly looked some what to the physical, as well as the mental development in her schools, but during the dark period of the world's history, this high ideal of soundness and sanity was lost, and we are just now emerging from a lethargy that has existed for centuries.

When we forecast the future of our children, and regard them as prospective parents and citizens, to whom we must leave the responsibility of parenthood and citizenship, and who must take, maintain and develop the institutions established and which we transmit—considering also the purpose of medical inspection namely—the early discovery of physical defects or disease, so that such defects may be corrected in early life, or that contagion may be reduced to a minimum, the detection and classification of deficient minds in order that proper instruction may be provided. It seems to me that there is a greater need in America to-day for this class of work than ever before, why?

*Read before the Campbell-Kenton County Medical Society.

In the first place a great many of the American woman of to-day look upon maternity as undignified and a menace to her liberty, so strenuous is the struggle for social prestige in all grades and classes of our population, that there isn't any time or money left for children and it is only after running the gauntlet of emmenagogue, midwife or a physician devoid of moral obligation, that the infant arrives.

Dr. Montgomery, in September, 1915 *A. M. A. Journal*, says "No one can consider the immediate and remote possible infective changes following interference with gestation without realizing the baneful influence of infection on the health of the individual. Although procreation may be continued it is not possible that slight changes in the structure may so limit the nutrition of the ovum as to impair its complete development and thus affect the future mental or physical course of the offspring, and even influence its progeny."

In other words has this child an equal chance with the boy or girl whose father and mother married with the impulse to be father and mother to boys and girls, with no protest against nature?

Again there are mountain districts in our country which the natural resources have just recently attracted means of transportation, consequently furnishing an exit for these heretofore isolated people, while they may boast of the purest American blood, yet they are sending to our cities, minds that are the products of intermarriage, as well as the diseases that are sure to follow in the wake of retrogression?

Another factor in our schools to-day is the child of the foreigner. We are not getting the class of immigration as in former years. Until stopped by the war, immigrants that were below par as compared with former times were being admitted to our country and with them ignorance, prejudices and reverence for royalty as well as the diseases that go with ignorance and filth, and while on this subject let us consider the future. The August 28, *Lancet Clinic*, quotes Irving Fisher on the European war, "It is the quality rather than the quantity of human life that should be held precious, the law itself does not hesitate to snuff out antisocial lives, when it sends criminals to the electric chair or to the gallows. Such weeding out even has been declared to be a necessity. If war would weed out only the criminal, the vicious, the feeble-minded, the insane, the habitual paupers, and others of the defective classes, it might lay claim with some show of justice, to the beneficent virtues sometimes ascribed to it.

But the truth is that its effects are dia-

metrically opposite, religion, philosophy and science agree in this that improvement is, or ought to be, the goal, the destiny of animal life upon this earth. Could one devise a sorrier way to improve the human race than war, which has even now beggared Europe of its men and to-morrow will people that continent with the degenerate offspring of the second and third class males."

The problem then of guarding our portals may be more of a problem in the future than in the recent past. It is estimated that there must be an average of at least four children to each family in order to maintain the race. Such is not true of the present day American family. This being the case it is perfectly plain to the student of eugenics that the America of the future is not to consist of the posterity of the people who have done things in the past, but out of the elements just enumerated must the future citizen be fashioned. The public school is the greatest factor in this fashioning, therefore, I claim it has a more difficult task to perform than heretofore and needs every assistance possible.

According to Dr. Hoag, March 7, 1914, *Lancet-Clinic*, "The new conception of the school health officer is that he shall be a specialist carefully trained in the problems of child hygiene and particularly as this applies to the school child. School hygiene should include in its functions not only the health supervision of school children and the maintenance of a healthful school environment, but also the supervision of the teaching of hygiene, supervision of physical education and the instruction of teachers on the subject of the physical and mental observation of children. We must adapt the school to the child instead of vain attempts to force the child to fit the school. This is not practical in every locality, because of inadequate finances and facilities. If the inspector is to be measured by the above standard, his entire time would be required, consequently he should be paid a reasonable salary.

Clinics and charitable organizations, to look after the children whose parents are unable to secure the necessary medical attention for them, would be required, and then again if we are to fit the school to the child, special schools must be maintained.

It is easy enough for the inspector to send written notice to a parent that his or her child has defective vision, but in many cases, unless means of securing the necessary attention are supplied, your work is of no consequence.

Children may be excluded from school because of scabies or pediculosis, many of these must necessarily be kept out indefinitely un-

less the nurse visits the home and gives instructions relative to proper treatment.

Another condition frequently met with, especially in schools supplied from the poorer districts of the city, is impetigo contagiosa. Many children in the same room will become infected unless care is taken. It is readily amenable to treatment and causes little trouble if exclusion and proper methods are pursued.

It is not enough to exclude the child suffering from diphtheria or scarlet fever and where deemed necessary fumigate the school room, but the home should be visited by the inspector and if intimate association of other children living in the same building warrants such action, they should be excluded also.

And thus I might go on and mention numerous duties of the medical inspector outside of the special examination of each child.

In our school rooms there are gathered together children from every walk of life, every social caste, of various degrees of normality and abnormality. It is the purpose of the individual examination to detect the abnormal, so that proper steps may be taken toward its correction. We will find excesses, defects and perversions, but in all probability the saddest and most hopeless case is the defective mind; while we cannot hope for any great degree of success as far as recovery is concerned, yet by classification, segregation, establishing separate classes for them; classes which are smaller and where more individual instruction can be given we may hope to make many of them acceptable citizens even though they are not desirable citizens. Making them self-sustaining and not wards of society.

This idea was suggested as being practicable in Newport by Prof. King in his annual report of last year.

According to Dr. Reuben in the August, 1912 *Archives of Pediatrics*, "Mental deficiency is on the increase. One person out of every one hundred and fifty in our country are either idiotic, insane or epileptic. While the population of the United States has increased three and one-half times in the last fifty years, the number of mentally deficient in the same period has increased fifteen times."

If the department of school hygiene is to embrace this feature in its work, the medical inspector who handles this part of his work successfully must especially prepare himself. We cannot put all the mentally deficient in one class, they do not respond alike to the same circumstances, to the same method of teaching, but must have individual care and study.

The variety of causes of this affliction may throw some light as to why one is so differ-

ent from another who is just as unsound mentally.

I will not attempt to mention all the causes laid down for mental deficiency, because they are legion, but for instance, the maternal causes, mental and physical strain and stress of mother during pregnancy has a great influence on the future mental capacity of the infant. Of the ninety-two infants conceived during the siege of Paris in 1871, not one infant born was thoroughly healthy, and twenty-nine displayed marked mental symptoms.

St. Louis has her cyclone children. San Francisco her earthquake children. The Miami Valley will see her flood children. What of all Europe and is it far fetched to include America when considering consequences. Thus you see localities may at times be a factor in your investigation.

In considering this subject in a broad sense another important duty of the bureau of school hygiene is the supervision of physical training, especially as this applies to girls. As Dr. Kelly in his *Medical Gynecology* says, "No degree of native intelligence, no advantage of modern educational method is too great for the woman who is to be a mother, no knowledge but may be put to use in the care of a home or training of a child. There is no possibility of over-development of the powers of either father or mother when we consider that biologically speaking the production and education of children is the greatest human achievement."

A girl at the school age is the product of her home environment and inheritance—from then on school life and training has much to do with her future health and happiness. The seat she occupies, the habits formed, the character of exercise, the ventilation of the room, all these and more must be considered in shaping her physical being.

In conclusion you may ask what are you doing in our own city?

We have the same conditions to meet as in the larger cities. We have the abnormal, the poor, the foreigner, the degenerate American, we have the mentally deficient, to my knowledge there are seven of the last named in one building at the present time. On the other hand as you all know we are not blest with the means and facilities necessary to meet these conditions in a perfectly satisfactory manner. We endeavor through individual examination to find those needing medical attention and refer them to their family physicians, and through the nurse it is our plan this year to come in personal touch with those parents who entirely disregard our advice concerning the physical condition of their child.

In many instances poverty is the barrier.

Where this is true we utilize what means we have at hand, namely the district physicians, women's clubs and individuals, who are charitably inclined. Again there are those that come under the juvenile authorities and still another class who fail to see the importance, and even become indignant when informed of some defect in their child. In such cases diplomacy is the remedy—a visit to the home by the nurse—a personal talk will reach much farther than a printed notice sent home by the child.

Where a child is home because of some contagious disease we visit the home and exclude other children living in the same building where intimate association warrants such action. This precaution in many instances, I believe, is of great value in preventing the spread of contagion. I am sure Dr. Todd will sanction the statement that medical inspection renders valuable service to the health department.

Heretofore our great mistake was failure to follow up the cases needing attention, because of this, results were discouraging. In some rooms less than 5 per cent acted upon our advice. In one room it was 60 per cent, but the average was not much, if any, over 20 per cent. This year with the work better systematized I know we are getting better results. During the months of December and January, twenty-two children in my district were fitted with glasses. In fifteen of these cases financial distress prevented the parents from taking the necessary steps, as a consequence it remained for the generosity of some of our physicians and the several mothers' clubs to bring about the desired results. I am perfectly willing to confess that many times in our necessarily hurried examination, and even though the examination be complete, we are guilty of sins of commission and omission. Perhaps to the family physician who lives close to the hearts of his people and better understands their physical make-up, our recommendations at times may seem ridiculous, but I beg of you to bear with us, as no one claims infallibility. I say to you it is a responsible position because I know it has been the means of changing disease processes. Appreciating to some extent at least this responsibility, who could but work conscientiously and we need to feel that each of you endorse that which we are trying to accomplish.

URINALYSIS IN LIFE INSURANCE.*

By L. T. ECKLER, Falmouth.

The growth of insurance business within the last century demands that we give this field of work some time and attention; which time should be directed towards determining the presence or absence of urinary diseases.

In accepting examinership for a life insurance company the examiner meets a double moral duty. 1st, he is to use every possible means to safeguard the company he represents from undesirable and hazardous risks; by a complete and careful examination of all applicants including the urinalysis.

The greater and graver urinary diseases are easily detected, but it is the beginning of serious conditions that should be earnestly sought for. 2nd, the examiner has a moral duty to the applicant. He should remove all doubt as to his eligibility to insurance, and see that he or she is justly represented.

If an applicant should present an unsatisfactory urinalysis and is otherwise insurable, he should be told that his urine was not as desired by you as examiner and request that other samples be submitted for future analysis. The diet should be restricted if necessary to arrive at correct conclusions.

The home office should be notified of the findings and their advice asked as to further proceedings.

Most companies have set rules by which the examiner is to be guarded in his analysis, which rules should be strictly adhered to. In establishing these rules the companies have endeavored to minimize their losses, which is but an item of good business judgment. They must, however, rely upon the honesty and integrity of their medical examiners. Many diseases of the brain, kidneys, liver and pancreas are detected through close analysis of the urine; hence the necessity of accurate urinalysis in this work.

Again the duty of the examiner to himself and his reputation as examiner should be considered. That he may safeguard himself the urine to be analyzed should be passed in his presence. If for any reason this is not applicable he should immediately take the temperature of the specimen to be examined. In this way it is impossible for the applicant to substitute the urine from some healthy individual instead of his own for analysis.

The container and test tubes should be thoroughly cleaned before they are used to be sure the reactions obtained are not due to contamination from substances other than the suspected urine. Having obtained a specimen the physician should make both the physical

*Read before the Pendleton County Medical Society.

and chemical analysis, and if requested he should make the microscopical test or have it made.

The physical examination should not be attempted until the urine has cooled to about 75 degrees. The color of the urine is first to be noticed. If too light in color it is likely the specific gravity is below normal, which condition is often suspicious of diabetes insipidus. If greenish in color it is suggestive of the presence of sugar; if dark or red there is a possibility of blood or excess of urates being present. The urine may be cloudy from phosphates or earthy substances, which cloudiness will clear up by the addition of acetic acid or some stronger acid. Opacity of the urine indicates rheumatic or gouty conditions if due to urates; or to general debility if due to phosphates together with a decreased acidity of the urine.

Having completed the inspection the specific gravity is to be taken. If the urinometer reads above 1025 it suggests the possible presence of sugar. If below 1018 it is likely that albumin is present. The normal specific gravity should be near 1020.

No examiner is justified in reporting the absence of sugar or albumin upon the reading of the urinometer alone. There is often found albumin when the specific gravity is high, and sugar is sometimes present with a low specific gravity. It is the duty of the physician to make the complete chemical test in each case.

The chemical reaction of the urine to be analyzed is important. If too strongly acid when tested with litmus paper, the possible presence of sugar is suggested. If alkaline in reaction the presence of alkalinity of the blood is suggested. This alkalinity of the urine may be due to the presence of a volatile alkali like ammonia and suggests some derangement of the lower urinary tract.

After the physical examination has been completed the examiner should make a thorough chemical analysis; since sugar or albumin may be present in urine otherwise normal. There are other substances often present in the urine which might possibly give reaction similar to the above mentioned pathological elements; the differentiation of which should be made, otherwise the examiner is not doing his whole duty.

The tests for albumin are numerous and many of them very accurate. Most insurance associations accept Heller's nitric acid test, which consists of putting a quantity of pure nitric acid into a previously cleaned tube and allowing a volume of urine to flow down the side of the inclined tube; care being taken to prevent agitation of the mixture. If albumin be present an opalescent ring of coagulated

albumin will be seen at the junction of the acid urine. If the albumin be in small quantities it is necessary to set it aside for thirty minutes, before the reaction appears. It is important to differentiate the results of the test from urates, which shows the precipitate to be a light or brownish cloud higher up in the added urine. The application of gentle heat will dissolve the precipitated urates.

The oldest test for albumin in the urine is the heat and nitric acid test. This is still in use by many insurance companies..

To apply the test the quantity of urine previously put into clean test tube is boiled. If a precipitate appears it is either from the presence of albumin or earthy phosphates. The addition of a few drops of nitric acid will clear up the precipitate if due to phosphates, while it has no decided action on albumin.

The heat and acid test is sometimes misleading, especially if the albumin be present in minute quantities, and the acid used in excess. In such cases a soluble acid albumin called "syntonin," is produced; which is not precipitated by heat. If the acid be too small in quantity, to distinctly acidify the urine, and if phosphates be in excess, only a part of the phosphates will be dissolved, the remainder uniting with the albumin forming an alkali albuminate, which will not be precipitated by heat.

There may be foreign substances, as pectones, vegetable alkaloids, and oleocresins; together with such normal substances as mucine and urates the reaction of which resembles albumin: the differentiation of which is important. In cases of doubt Purdy has recommended the potassium ferro cyanide test. This test will bring albumin into view with certainty while it will not produce the reaction with other substances. To apply the test, put into a test tube 15 to 20 drops of acetic acid and add double the amount of aqueous solution of potassium ferrocyanide, fill the tube one-half or two-thirds full of the suspected urine. Invert the tube several times to thoroughly mix and place the tube in a bright light. Within one-half to two minutes the reaction will appear; presenting a milk-like turbidity. This method will not produce the reaction with the other substances previously mentioned. If an applicant is in all respects healthy and his urine shows albumin, the examiner should regard it as a danger signal and such applicant should not be recommended as a safe risk. In young individuals there is sometimes a trace of albumin which appears to be of functional origin, known as functional albuminuria," and does not mean that the kidneys are damaged. In persons of middle age or past, the traces of

albumin should be given much more concern. We have no good way of separating the functional from the pathological cases of albuminuria, therefore we should regard all cases showing albumin, as unfavorable. Perfectly healthy applicants who show albumin in their urine are class of risks that have proven unprofitable to life insurance associations, from the fact that the conditions are so frequently overlooked.

In women, the urine accepted for examination is often contaminated with secretions from the vagina or uterus, if there is a leucorrhea, which fact should be known to the examiner before making the analysis.

The physician should remember that the healthy and robust appearance is not an index to the beginning diseased condition of the kidney.

In our search for sugar in the urine it is well to remember that grape sugar is found in minute quantities in normal blood, the amount of which varies according to the functional activity of the liver. The maximum in pathological cases is given as 1-10 per cent. which is seen in diabetic conditions. It is possible that normal urine may contain small traces of sugar, but it is in such small quantities that its detection is not seen with the ordinary chemical tests.

The fermentation test is regarded by all insurance companies as conclusive, and they often ask that a sample be sent to the home office that the fermentation may be made.

Some of the copper tests are reliable and are accepted by most companies. Of these Fehling's test has been much depended upon. Fehling's test is made by placing in a test tube about one dram of the test solution. The solution is boiled, if it remains clear it is good for use. Mix with an equal amount of clean water and boil. To this drop in a few drops of the suspected urine, if the reaction does not appear, drop in more urine; and so continue until the quantity of urine used equals but does not exceed the amount of test solution used. If sugar is present a yellowish or reddish yellow precipitate will be thrown down which will settle to the bottom of the tube.

Haines' test is preferred by many companies since the solution keeps indefinitely. To apply the test put a dram of the solution in a test tube and boil. To this drop in 6 or 8 drops of urine, if sugar be present the reaction will be seen as in Fehling's test. Never use more than 6 or 8 drops of the urine, more than that of normal urine has been known to produce the reaction.

Purdy recommends the phenyl-hydrazin test in cases of doubt. The test made with indigo and sodium hydroxide is also reliable. After sugar has been found in the urine the

risk is just as undesirable as if it contained albumin. The examiner must not recommend such risks, unless he is sure that the trouble is dietetic, in which case the applicant should be put upon a strict non-saccharine diet and told to submit other samples for examination. The home office should be notified and their advice asked.

True diabetes mellitus is often preceded by slight traces of sugar. If too much urine is used other substances may give the reaction, as uric acid, creatin, vegetable alkaloids or tannin.

It has been said that "a man with sugar in his urine is like a house that is undermined, he will surely fall, but no one can predict when he shall fall."

Fortunately not many insurance companies require examiners to make the test for urea. No urinalysis is complete without a knowledge of the amount of urea present. The normal amount of urea excreted by a person of 145 pounds is 512 grain in twenty-four hours. An allowance of 20 to 30 per cent. should be made for variations in exercise, diet and weight. If the total amount in 24 hours should be less than 300 grains there is reason to suspect serious disease of the kidney.

In urine excreted after taking such remedies as copaiba or buchu the result is often misleading, these remedies confuse the chemical tests.

All urine should be filtered before analysis to rid it of mucus and urethral discharges.

Fortunately we as examiners are not often called upon to make microscopical analysis of urine. The microscopical findings are no less important than is the chemical analysis.

If a microscopical analysis is to be made we are to look for casts, pus, blood and calculi. The presence of any of the above named pathological elements greatly reduces the desirability of the risk. The presence of casts in the urine is often the first symptom of serious disease of the kidney.

The urine of middle aged people showing the presence of pus indicates a feeble resisting power to pyogenic bacteria, while in the young the possibility of tubular pyelitis is suggested.

If there is blood in the urine, it is to be determined whether it is from the upper or lower urinary tract. Blood that is thoroughly mixed with the urine is usually from the upper tract, and if bright in color shows some tendency to form clots it is suspicious of trouble along the lower urinary system.

The presence or absence of calculi must be ascertained, which can often be done from the history in each case. It has been stated that applicants giving a history of attacks of renal colic are not safely insurable until a period

of five years have elapsed, since having the last attack.

An examiner for any life insurance association will not have done his entire duty unless he has been faithful to his obligation and thorough in his analysis.

HEADACHE AS A DIAGNOSTIC SYMPTOM.*

By F. R. BURTON, Chenoa,

Headache is a symptom so frequently met with in daily routine practice that it would seem worthy of a more careful consideration than it usually receives at the hands of the general practitioner.

It is a symptom which may be of the slightest significance and then it may be indicative of some grave and serious pathology.

When a man comes in complaining of headache it may mean that he is suffering from uraemia due to some form of nephritis. Again it may mean some serious intracranial pathology, or it may signify that he has tarried too long at the shrine of Bacchus or had tangoed until the wee small hours. Consequently it behooves us to make a very careful investigation of these cases before carelessly prescribing a dose of antikamnia, acetanilid or morphine simply to secure relief from immediate pain.

So numerous are the conditions which are accompanied by this symptom that time will not permit me to go into any lengthy discussion of all of them, consequently I will simply give some of the classifications of the conditions producing it with reference to causes, character, location, etc., and discuss very briefly the mechanism of headache as well as a few of the conditions of which it is the most prominent symptom and try to impress upon you the importance of a more careful examination of patients than is generally made in routine practice.

Headache means pain in the head and is of two types which are more or less distinct.

1st. We have the neuralgic which is due to nerve irritation and is felt in the course of the sensory nerves and is more acute and localized in its manifestation as is seen in supra orbital neuralgia or sun pain.

This variety is frequently of rheumatic origin and if a careful examination is made tender points can be located along the course of the nerve or where they emerge from their foramina.

As this is not a true headache but more properly a neuritis we will not discuss this particular variety.

The second, or true headache, is a diffuse pain affecting different parts of the head and not confined to any particular nerve. We will discuss the different phases of this symptom with reference first as to causes, second character of pain and third location of the pain and then take up a rather brief discussion of some of the different points in connection with the subject in general.

1st. We have headache due to anemia, sudden hemorrhages, and nephritis.

2nd. Constitutional diseases, as diabetes, gout, lithemia and rheumatism.

3rd. Specific and infectious diseases especially the acute febrile diseases as typhoid fever, pneumonia, la grippe, measles, tonsillitis, smallpox, and many other of the exanthematous diseases.

4th. Chemical intoxications as alcohol, lead, mercury and tobacco.

5th. Neuroses, as epilepsy, hysteria and neurasthenia and exophthalmic goiter.

6th. Inflammations or organic diseases of, or affecting, the nervous system, embracing arteriosclerosis, diseases of the cranial bones, meningitis, encephalitis, syphilis, tumors and abscesses.

7th. Reflex headache from diseases of the naso-pharyngeal spaces, defects of vision, middle ear disease, gastro-intestinal, and from the sexual organs.

This in brief is a more or less complete list of the different conditions which are responsible for the greater number of cases seen.

The pain in the head may be of different varieties and may be very significant of the conditions producing it.

1st. We have the acute lancinating pain which is paroxysmal in character and oftenest seen in the neuralgic forms.

2nd. The pulsating and throbbing pain. This variety, if unilateral and accompanied by special sensory disturbances and vasomotor manifestations, is indicative of hemi-crania or migraine.

3rd. Or the dull heavy diffuse pain. This is indicative of gastro-intestinal disturbances and fevers.

4th. The binding or pressing headache which is so characteristic of the neurotic.

5th. The hot, burning sore headache felt in anaemia and rheumatism.

6th. The sharp and boring pain of epilepsy and hysteria.

The location of the pain may also be a finger board to point us to the etiological factors in the production of this symptom and is worthy of notice. Of course there are no hard and fast rules as to the location of any particular pain, but there are certain well de-

*Read before the Bell County Medical Society.

finer areas which are described in giving the location of the headache.

First, pain in the frontal and temporal region.

Chronic or persistent pain localized in these regions may mean anemia or neurasthenia, nephritis and uraemia, gastric disturbances and constipation, diseases of the eye, as defective vision, iritis and glaucoma, middle ear, naso-pharyngeal and frontal sinus infection, disease of the bone or tumor formation.

Pain in the vertex or top of the head is very characteristic of neurotic troubles, as for instance the *clavus hystericus* of hysteria, also of anemia which is a frequent factor in all neurotic cases, it is also indicative of diseases of the female sexual organs, especially prolapse of the uterus and ovarian disease.

Occipital and cervical pain is indicative of cerebellar tumor and other cerebellar lesions, meningitis, epilepsy, adenoids and middle ear disease, as well as eye strain, diseases of the cervical vertebra, constipation, retroversion and subinvolution of the uterus.

Probably the most frequent form of head headache we are called upon to treat is that due to neurasthenia. It is usually felt in the vertex, but may be felt as a constricting band around the head. In fact it may be felt in any of the different painful areas, or it may be general. It is usually worse in the morning and gradually disappears as the day passes.

Another condition which is frequently responsible for the cases seen is anemia and impoverished conditions of the blood. It is, usually, a sore pressure pain which may be felt in the vertex or temporal regions.

A diagnosis of this condition can usually be made by taking into consideration the general aspect of the patient, and a blood examination, especially as to the hemoglobin index.

Nephritis is another condition which it is well to keep in mind when chronic or severe headaches are encountered. There seems to be two causes of headache in this disease. One is the violent headache of uremia, and the other, and more frequent cause of the chronic form, is the accompanying vascular changes. The pain of the cardio-vascular disturbance is apt to be of the dull throbbing variety. It may be felt in any of the painful areas or it may be diffuse and often accompanied by vertigo and tinnitus.

Another form of headache which is very frequently seen is that due to nasal obstruction and frontal sinus disease. This pain is very characteristic. It begins at the root of the nose and extends out over the supra-orbital region and straight back to the occiput. It is markedly aggravated by coughing, straining and stooping.

One of the most frequent causes of head-

ache in school children and young people is eye strain.

This pain may be either frontal or occipital, or both, and comes on after long continued use of the eyes as in reading, sewing, and doing fancy work and is usually worse in the afternoon and relieved by a night's rest to the eyes.

The pain felt in the head as a result of gastric disturbances and constipation is dull, throbbing or pulsating, either frontal or occipital and made much worse by sudden movements of the head.

The headache due to disease of the female generative organs is both occipital and vertical. It is sharp and radiating in character. There are however other symptoms presented by the patient which will point to the sexual organs as the seat of the trouble. These are menstrual disturbances and leucorrhoea.

The foregoing is a brief and condensed outline of some of the most frequent and prominent points in considering the symptom, headache, and is about the different classifications given by most authorities.

As I said in the beginning the subject of headache is so comprehensive that it is impossible to go into a full discussion of the subject in a paper of this kind. Consequently I will go no further with the different classifications but will consider some other phases of the subject.

In reviewing the literature at my command I find that the exact mechanism of headache is very little understood. There are various theories in regard to the exact seat of pain and the causes. Some investigators claiming that there are no sensory elements in the cortical regions of the brain and that the pain is felt in the membranes.

Others claim that pain is only felt in the regions supplied by the trigeminal and posterior occipital nerves.

Be that as it may, we know that it exists, and that it is one of the most frequent symptoms for which the physician is called upon to treat, or rather to prescribe, and we also know that he generally prescribes without further thought or consideration than the relief from the immediate pain.

As to the distribution of the nerve fibres to the different parts of the cranium and cerebral centers, and just where the pain is produced I am not prepared to say. Neither do I consider that of material moment. However, the causes which operate to bring about the pain is of very great importance and should be understood, so that a rational treatment may be adopted, not alone for temporary relief from the immediate pain, but for the purpose of removing the exciting cause.

After a careful consideration of this symptom, and the various causes and conditions giving rise to the same, it seems to me that headache is brought about by a sudden or rapid change in intra-cranial tension, or rather by a disturbance of the equilibrium of the intracranial circulation.

Another element which may play an important part in the production of this pain is the part played by toxins and their effect upon the nerve cells and centers. It is probable that certain toxins circulating in the blood, has a sensitizing effect upon the nerve cells, rendering them more susceptible to painful impressions, and to changes in the intracranial pressure.

Increased intracranial pressure from any cause, especially if rapidly brought about, whether due to tumor growths, effusion into the ventricles and subarachnoid spaces, abscess or traumatism, venous stasis or increased arterial tension, will bring about this symptom, headache.

Again, some of the most violent and troublesome headaches are seen in cases of extreme anemia. It would seem, in this condition, that a marked diminution, or impoverishment, of the blood supply is responsible for the pain. So taking the whole symptomatology complex found in the different varieties of headache it would appear that circulatory disturbances are the immediate cause of most attacks of headache seen.

The least frequently seen headache is that produced by intracranial pathology, such as tumors and thickenings from traumatism and inflammations, abscesses and other intracranial pathology. While this pain may be diffused it is more likely to be localized, and when taken with other symptoms such as motor and sensory disturbances and the peculiar projectile vomiting a diagnosis can usually be made. A patient suffering with this train of symptoms should always be carefully considered and an ocular examination made to discover any circulatory changes in the fundus, which may make the diagnosis clear. A history of the case is very important, as a history of an injury, or an attack of syphilis in the past life of the individual, may very materially help us in arriving at a correct diagnosis and to adopt a rational treatment.

Not all brain tumors are accompanied by headache. This may be accounted for by the slow development of the growth permitting the cranial contents to adjust themselves to the altered conditions.

The same is true of the slowly increasing blood pressure of the arteriosclerotic. Here the process is so slowly developed that the nerve cells have ample time to adjust them-

selves to the changed condition, there is no sudden or rapid change in the circulatory equilibrium of the brain centers hence pain is not an accompanying symptom. However, in this condition if there is a sudden increase in the arterial tension and rise in blood pressure, as is often seen in nephritics, very violent headache is experienced.

Albumen in the urine of the pregnant woman has always been considered a danger signal, and it is, but when unattended by headache and increase of arterial tension, it is far less significant. On the other hand a marked rise in blood pressure, accompanied by severe headache, are danger signals of the approaching storm, eclampsia, whether albumen is present or not, and must not be ignored. The headache is generally in proportion to the increase of intra-cranial pressure, and if prompt measures are not adopted to lower the vascular tension eclampsia will most surely develop.

The same may be said of acute nephritis and the acute exacerbations of the chronic varieties. The toxemia, in conjunction with the increase of vascular tension, will bring on the characteristic uremic convulsions.

Violent headache in patients who are the subjects of cardio-vascular disease is often a premonitory symptom of cerebral hemorrhage.

Persistent headache in young people, especially in school children, and those who use their eyes constantly, is a plain index pointing to errors of refraction, and they should be promptly sent to a competent oculist for examination and treatment. The constant strain upon the ocular muscles to overcome the visual defects, causes irritation and over stimulation of the nerve centers, thus producing hyperaemia and congestion of these centers resulting in pain and discomfort.

While defective vision may produce head pains in the older subject it is nothing like so frequent as in school children and young adults.

Headache accompanying neurotic conditions is brought about by vasomotor disturbances. Insomnia is a frequent accompaniment of all neuroses and the loss of sleep added to the other causative factors, very much aggravates the pain.

Pathological lesions of the female generative organs, such as lacerations of the perineum and cervix, metritis and endometritis, subinvolution, retroversion and prolapse, tubal and ovarian disease, dysmenorrhoea and other menstrual disturbances faulty development etc., are all frequently accompanied by severe headache.

There is a probability that disturbance of the internal secretions, especially of the ovary

may be a factor in the production of the headache in this class of cases especially, and in other neurotic conditions.

It has been proven that secretions from the ovary, thyroid and adrenal glands all have a marked effect upon the circulation through the vaso motor mechanism. This is a phase of the subject about which very little has been written, but I feel that it is worthy of consideration when considering this subject.

Just how a retroverted subinvolved uterus will induce headache has never been clearly explained. However, we know that it is one of the prominent symptoms of these conditions. The only way I am able to account for it is the effect upon the circulation through the vasomotor system and possibly, and probably, the disturbance of ovarian function.

Renal, gastric and enteric prolapse are frequently accompanied by neurotic symptoms and headache. In these conditions, coupled with the displacement of viscera, there is interference with motor and secretory functions of the displaced organs as well. There is usually lack of muscular tone, disturbed digestion and constipation. The resultant absorption and toxemia with their vasomotor disturbance produce the neurotic symptoms with headache.

We might go on to much greater length upon this subject but we think enough has been said to show that this is a symptom of an almost infinite variety of conditions. That it may be of slight significance or vast importance, and that in cases of persistent headache it should receive careful consideration.

The individual who only suffers from an occasional transient headache may be treated with much less consideration, as the pain is transient in its character and usually indicates some slight toxemia from over indulgence in food or drink. A brisk purge with a dose of some analgesic will usually suffice to bring about a cure.

That seen in the early stages of the acute infectious and febrile diseases is also transient and of minor importance and may be treated the same way.

On the other hand headache in the pregnant woman and in nephritis is not to be ignored, or prescribed for lightly, as it is a danger signal, and when attended with marked increase of blood pressure, is one of the most prominent symptoms of threatened eclampsia, and prompt and effective eliminative treatment must be adopted to avoid the impending catastrophe.

Rest in bed, a milk diet with brisk purgation, preferably epsom salts, with some nerve sedative to control the pain is about the best line of treatment to be adopted in these cases.

If the case is urgent and the blood pressure

high venesection will be the quickest way to ward off the impending convulsion.

The same may be said of patients suffering from nephritis, especially the acute variety. In patients with cardiovascular disease with a sudden rise of blood pressure, headache will be present and may be a sign-board pointing to impending cerebral hemorrhage. The same line of treatment should be adopted in these cases, viz.: measures to rapidly lower blood pressure and I know of no other way which can be so very effectually accomplished as by venesection.

When a man or woman who has reached or passed middle life, comes to us complaining of constant or oft repeated headaches a careful examination of the urine should be made as well as blood pressure readings for this is one of the most frequent symptoms of interstitial nephritis and arteriosclerosis. Not only a chemical analysis but a microscopical examination of the urine should be made as albumen is not a prominent element in this condition.

In view of the fact that headache is such a prominent symptom of so many serious conditions let us not simply prescribe some coal tar remedy to relieve the pain but let us resolve to make a careful examination to, if possible, arrive at a correct opinion as to just what etiological factors are responsible for the symptom as presented in the headache?

To continue to prescribe analgesics for these patients is just about as rational as to prescribe cough remedies for a patient with a chronic cough without examining the lungs.

Then let us recapitulate just a little.

1st. Headache is one of the most frequent symptoms for which the physician is called upon to prescribe, and one which often fails to receive proper consideration.

2nd. That headache may be of slight significance, and again it may be significant of some grave and serious pathology.

3rd. That the exact mechanism of headache is very little understood.

4th. That we believe it to be brought about by sudden changes in the circulatory mechanism of the brain. Either a sudden increase or decrease of blood pressure or impoverished conditions of the blood.

5th. That toxic substances circulating in the blood may have a sensitizing effect upon the nerve cells rendering them hypersensitive to altered circulatory changes.

6th. That disturbances of internal secretion in certain neurotic conditions may be operative in many cases.

7th. That a history of the case may enable us to make a correct diagnosis as well as a physical examination. A history of injury

or syphilis in the past life of the individual may make clear an otherwise obscure case.

As to the treatment of headache I have said nothing. Suffice it to say that the treatment of any case would be the treatment of the condition which is giving rise to the head pains and no rational routine treatment could possibly be suggested to suit all cases.

ACUTE RHINITIS.*

By J. F. ADAMS, Bagdad.

Acute nasal catarrh, acute coryza, or cold in the head. This is an acute inflammation of the Schneiderian membrane with a tendency to involve the adjacent sinuses and passages.

The most frequent cause of this disease is exposure to draughts of air and to atmospheric changes which are most common during the winter and spring seasons, but may be due to inhalation of some irritant substances. It sometimes occurs as an epidemic which points strongly to its microbic origin. Any local disturbance of circulation caused by exposure is supposed to be the means of preparing the soil for bacterial invasion.

SYMPTOMS

The patient has chilly sensations followed by fever, the temperature ranging from 100 to 101 or 102 F., with frequent sneezing and headache. There is also a feeling of general indisposition. We seldom have much pain in back and muscles except in severe cases. The pulse is fast and skin dry and hot and increased thirst. The nasal mucous membrane is swollen and interferes with the sense of smell and taste and is covered first by a secretion of mucous and later by a mucopurulent substance.

Frequently adjacent mucous surfaces become involved as that of the eyes, larynx and pharynx, giving rise to acute inflammation of same. Sometimes it extends to the bronchial tubes causing bronchitis. The disease generally runs its course in six or seven days, but the nasal discharge, which gradually diminishes, usually lasts a few days after acute symptoms subside.

DIAGNOSIS

With the above named symptoms present, the diagnosis is usually readily made. But we should be on our guard lest we have some acute infectious disease which is characterized by acute catarrhal symptoms as measles and influenza.

PROGNOSIS

This is good, except in neglected cases

where the bronchial tubes have become involved, giving rise to bronchitis, or in the very young or old persons.

TREATMENT

If symptoms are very distressing, I first give a hypodermic of morphia and atropia; then I give a few broken doses of calomel combined with soda followed in five or six hours by oil or salts. I also give quinine and Dover's powders at night. If fever is very high I prescribe tincture aconite or phenacetine in small doses until temperature is reduced. The local treatment consists of remedies to soothe and reduce swelling of nasal mucous membrane, of which many things could be mentioned, as cocaine occasionally used or menthol. But in my opinion a weak warm solution of sodium chloride is our best remedy. I always advise patient to stay in the house and even in bed if symptoms are severe, and advise that the room be kept at an even temperature.

EYE STRAIN.*

By JAS. P. EDWARDS, Middlesboro.

Asthenopia, is a disease and spoken of as "weak eyes," eye strain means a weakness or fatigue of the eye, applying especially to the retina, ciliary muscle, the extra ocular muscle, or a general weakness of any one or two or all of these structures in one and the same eye.

Asthenopia may be retinal, muscular and accommodative. Retinal is the rarest form and usually occurs in females, it is brought about by over use of the eyes in the too dim or too bright light, and may result from too long prolonged use of the eye at any kind of work or in any kind of light, it may result from exposure to the sun's rays, to electric lights or lightning or by a reflection from bright lights or reflection of the sun on snow, such patients are very unsatisfactory to treat, the chief symptom is dread of light.

Muscular asthenopia is due to weakness of or fatigue of the extra ocular muscles, which will produce strabismus and diplopia, these patients usually complain of seeing the nose or seeing double.

Accommodative asthenopia is the most common form and due to fatigue of the ciliary muscle, it is caused in various ways, from over use of the eyes in any kind of light, usually you have headaches, frontal or fronto-occipital, pain may extend into the shoulders and back of neck, the headache develops during the use of the eyes and grows worse if the effort is prolonged, and usually ceases after the eyes are rested, some patients suffer with

*Read before the Shelby County Medical Society.

*Read before the Bell County Medical Society.

constipation, indigestion, heart-burn, nausea or even vomiting, others may have nervous attacks, drowsiness or insomnia, severe attacks of migraine are often caused by eye strain, a great many patients do not consult the ophthalmologist for headaches. they usually see the family physician, and he knowing the most of their troubles overlooks the eye, the patient's seeing qualities may develop the history of distant vision and good near vision or vice versa, this should be inquired into very carefully, if the patient is over forty, the vision gradually failing then you have presbyopia. If the patient wears glasses it is well to inquire whether they were ordered by an ophthalmologist or if they are the patient's own selection, how long they have worn them and if the same symptoms exist as when the glasses were ordered.

I have recently had three patients that have always had an optician to fit them with glasses, they went along comfortably well for awhile, when I looked into their eyes I saw evidences of choroiditis in one, albuminuric retinitis in one and in the other a high degree of astigmatism with improperly fitted glasses. I went so far as to analyze the urine in one of these, the test tube on boiling was one-fourth solid, showing a great quantity of albumen, the optician had told them that they only had weak eyes.

These cases are common, and if they had been examined by an ophthalmologist in the beginning such patients would not lose their eyesight, and their vision would not be impaired, and their lives would be prolonged. We see children with eyes crossed, the family will invariably say they have been so since they had whooping cough, measles or some other childhood disease, this is most usually due to eye strain, one of the extra ocular muscles being weak gives way and the child sees double during convergence, to hide one image, the object looked at is brought closer to the eyes, and only one eye is used the other swings out or in, as the case may be, and if not corrected will in a few years become useless and vision in it will be lost.

Infants and children's eyes should never be exposed even in sleep to the glare of strong light, artificial or natural, and this is particularly imperative when the child is taken out in the perambulator or carriage, they should not be encouraged to use their tender eyes for near work and their play-things should be large objects easily seen.

Children at birth are usually hypermetropic—a short eye ball, the rays focusing behind the retina, their condition becomes less marked and may, as it often does, pass into a state of normal refraction as the eye grows larger, at age of ten the child has more active accom-

modation than at any age, therefore their eyes do not give them much trouble unless they begin to use their eyes very early in looking at objects close to them, the persistent and excessive demands made upon the accommodation for the purpose of giving clear and distinct vision frequently produce a sort of cramp of the ciliary muscle causing pain and congestion in and around the eyes and inability to use them for any length of time for near work, this is especially true of a farsighted eye because a part of the accommodative power having already been used up in obtaining clear vision when looking in the distance there is much less to fall back upon and a greater effort is required to see clearly when the eyes are called upon to do prolonged reading, sewing, bookkeeping, etc. The vision soon becomes blurred and the eyes have to be rested before the work can be continued. If much near work is persisted in, complaint is made of pain, fatigue, a sensation of weight, frontal headache and other symptoms of discomfort about the eyes, a complex of symptoms commonly called hysteria, the conjunctiva becomes congested and frequently the margins of the lids are red and inflamed, soon there is a feeling of sand in the eyes with burning and smarting of the lids and eyeball and an increased secretion of tears, where the strain is kept up for some time styes and other affections of the lids are frequently met with, when the strain is not relieved by appropriate treatment the effort to see distinctly becomes worse, for correction of such conditions it is necessary that parallel rays of light should be brought to a focus on the retina without the aid of accommodation, the ciliary muscle is the muscle of accommodation and must be paralyzed by the use of a cycloplegic and then to bring the rays to a focus on the retina, the proper spherical lens must be used in conjunction with a cylinder in most cases. Duane believes that a cycloplegic should be employed for determining the refraction in practically all cases not glaucomatous below forty-eight and in some cases above this limit, it is almost impossible to determine the refraction of children's eyes without the use of a cycloplegic. If the oculist decides that glasses are necessary they should be put on at once and if they are put on by anyone not thoroughly competent, glasses will certainly do injury, and no one should attempt to fit the eye unless they have had sufficient training in ophthalmology and thoroughly understand the anatomy and physiology of the eye.

Most people and a few physicians do not know the difference between an optician and an oculist. Opticians advertise to fit glasses without drops in the eyes, the reason is they don't know how to use them and do not know

the effect on the ciliary muscle; they have never studied medicine, there is not one of them that can go into a medical college and matriculate for a course in ophthalmology or any special course in medicine. An optician is not an oculist, an oculist is a physician who specializes in the treatment of the eyes. The skilled optician is a trained mechanic whose business it is to make glasses when prescribed by the oculist. Your eyes are altogether too precious to take chances with them; they are trying to create or manufacture a new name—optometrist—to get half-way between an oculist and optician.

Glasses properly fitted to children will promote the physical and intellectual development of the child and prevent many years of suffering and perhaps irreparable ocular disease, children in poor health, especially if they exhibit ocular or ear defects or show a tendency to myopia or present evidences of eye strain should have little or no systematic schooling before they are twelve years old. That child will be happier and a better citizen, as well as a more successful man of affairs, who develops into a fairly healthy though imperfectly schooled animal at twenty than if he becomes a learned neurasthenic asthenope at same age.

The great importance of the faulty conditions of the eyes of our school children is obvious when it is known that normal eyes are comparatively rare. Intimately connected with school work as well as with life in our homes, offices and factories and other public buildings, is the important subject of illumination, thousands of eyes are annually injured by glaring or insufficient lighting, when healthy and satisfactory illumination can be had almost for the asking and we are getting farther away from the old idea that the best lighting system is the one that gives us the most light for the least money, some eyes need more light than others, but in a general way, we can say that from two to three foot candles is illumination enough for ordinary office work. The retina is very sensitive to strong lights.

The arc lights often used on the streets have a very injurious effect on the eyes, and when looked at for a few moments then look at another light or try to see some one approaching you will experience difficulty in seeing distinctly. We should give the lights in our homes as much attention as we do the plumbing.

Everything should be done to conserve our eyes from the time we first see light all through life.

ACUTE ARTICULAR RHEUMATISM IN CHILDREN.*

By A. S. BRADY, Greenup.

Your committee has seen its way clear to assign to me for a short paper a disease of common occurrence among children and one of great interest to the physician and of great suffering and damage to the child at the time of the attack and the numerous sequella of a very severe nature that is liable to result from an attack of acute articular rheumatism.

NOMENCLATURE

This disease is known to the profession as acute rheumatism, rheumatic fever and poly-arthritis. It is an acute, infectious non-contagious disease. The infection is characterized by an inflammation that travels from joint to joint and usually, or I might say almost universally, attacks joints on the same level.

ETIOLOGY.

That the infection is due to a micro-organism is beyond question. The bacillus has more or less motility similar to anthrax-bacillus and when injected into animals produces rheumatic symptoms and almost invariably produces a deposit on the valves of the heart. Other causes have been attributed to defective assimilation which produces lactic acid and other combinations with it.

There are other causes in which the nerve centers are primarily affected and have led to the so-called nerve theory in which the nerves are affected by cold and the local lesions are atrophic in character.

Heredity seems to play an important role in the production of this disease as in at least two-thirds of these cases a similar type can be traced to the ancestors. Gouty parents are very apt to produce rheumatic children.

Seasons of the year seem to have a predisposing cause in developing this disease. The spring of the year being most frequently the season in which it develops. One attack predisposes to repeated attacks. The tonsils have recently been noted as being a predisposing cause of the disease and it is noted that acute rheumatism, also endocarditis, has frequently been caused by tonsillitis and it has been proven beyond a doubt that the germ has been developed in the diseased tonsillar tissue.

SYMPTOMS

The symptoms of acute articular rheumatism in children are entirely different from that of adults. The fever never runs so high and is usually between 100 and 102. The

*Read before the Greenup County Medical Society.

swelling of the joints is limited and the inflammation and redness of the skin is not so marked as it is in adults. The pain is not so severe in children as we find it in adults and there are less joints involved as a rule than in adults. Sometimes the lower extremities are affected and again the upper extremities are involved. The most frequent symptoms are fever, vomiting, general malaise, anorexia and the multiple anthropany. Barlow and Warner described as a manifestation of rheumatism in 1881 a subcutaneous nodular condition found at the back of the elbow, around the patella and around the maleoli but this condition is not constant.

PROGNOSIS

The course of rheumatism depends largely on the treatment. While there is no absolute specific its course can be shortened and modified and the general system protected by sane and persistent treatment. The prognosis depends upon the care and treatment although we know that the disease has a tendency to become chronic. However, a case properly cared for should entirely recover.

The inflammatory stage lasts from ten days to two weeks. Cases complicating diphtheria and scarlet fever will last from eight to ten weeks. Rheumatism in children assumes the course of a general systemic infection. The intensity of the cardiac complications are not approximated by the intensity of the attack. The mildest cases frequently are associated with or followed by the very severest type of cardiac complications. The heart complications are manifest in from 80 to 85 per cent.

TREATMENT

The first thing to do is to put the child to bed, and should be kept in bed until the last particle of fever is gone. When the disease is localized we should direct our treatment locally in order to prevent as much absorption and also elimination of the toxins as possible. Watch for complications and anticipate them and ward them off, if possible. Rest, absolute rest, is to be insisted upon. How many times have we seen a relapse in this disease by the patient simply getting out of bed before they were sufficiently convalescent.

DIETETIC TREATMENT

This is of the utmost importance. Milk and milk foods are ideal. Cereals and fruits especially the citreous fruits are advisable. Broths and soups made from lean meats are good, buttermilk and all fermented milks are allowable, seltzer and milk are good, the alkaline waters as lithia, appollinaris, white rock, etc., with lemonade or orangeade.

MEDICINALLY

The first thing to do is to clean out the intestinal tract. Citrate of magnesia repeated in the proper dose is best used every two hours until the bowels are well cleansed. Rheubarb and soda are good, or you may use calomel and soda. I like the salicylate of soda as a regular medicament and give it in three to five grain doses as age and condition would indicate. Cotton saturated with the oil of wintergreen over the inflamed and affected joints will do good. The fever of this disease may be cared for in the same way that it would be in other diseases. Sponging with care will serve a good purpose. The restorative treatment after this disease is of the utmost importance. The food should be of the most nutritious kind. The iodides, especially of sodium, is indicated. Malt extracts are good as is cod liver oil, cream, butter, and cereals are the ideal food. Lastly, care of the patient after recovery in that he is well but not over-dressed, feet well protected and well ventilated but dry rooms are necessary in order that a repeated attack or reinfection may not occur.

A CONDITION FOR WHICH HIPPOCRATES BLED.*

By W. W. MORTON, Bluefield, W. Va.

Why did he bleed?

To meet a condition.

The same conditions now confront us, with an increased mortality, causing 90,000 deaths in the United States in 1913—10,000 more than the great white plague.

A condition that has warped the wisdom of therapeutic application of our great teachers of medicine, and empiricism still leads in its treatment. Lobar pneumonia. A disease that we have been led to believe from former teachings, was a lung disease. This conception still sticks in our craws, but we will pass on to the modern conception of this grave infection. They now tell us 'tis not a lung disease, but a local manifestation of a constitutional infection, and that the pneumococci are swarming in the blood before we have a local lesion, and that they may kill without a local lesion of any organ, and that death is caused by the resulting toxemia. This coincides with Victor Vaughan's "Phenomena of Infection." (If you have not read it—it will pay you to look it up). We will now pass on to the clinical history. It grips you like a thief in the night, terrifies, agonizes, prostrates, asphyxiates, and poisons. It is caused by a minute specific organism, that we inhale, lodging upon a diseased or denuded tonsil, or an irri-

*Read before the Mercer County Medical Society.

tated or diseased bronchial branch. It only lingers here long enough for germination and to *mine the tissues for future use*. They then push on through the stroma into the blood channels, and make a rapid circuit through the system, leaving a poisoned trail behind. Not possessing the power to multiply in these rapid and pure eurrents, they, like the tadpoles, and wiggle tails, seek a stagnant pool.

Their sowing has produced *this at the port of entry*. They now dig themselves in here and prepare for the counter-stroke they know nature will deliver. Upon this Bunker Hill, they, or nature, will meet their Waterloo. If she can hold them here, she wins; if they break through and fill the vital channels again, she loses, for she cannot stand further pollution.

The eclectic localization of the pneumococci in the pulmonary tissue has a plural purpose. To better the metabolic requirements of both friend and foe. The receptors here contain large amounts of complex proteid fluid. Being primarily obligatory aerobes they seek the free oxygen here. Later they become facultative anaerobes. They are driven here by nature, that she may have them come in contact with a plural complement that arrests and limits their cell destruction, that she may surround, nest, dilute, and destroy their asphyxiating gases that poisons the tissues, lowers and weakens all the muscular forces, poisons and renders the blood impotent, and produces a local stasis, that we have been content to call "Consolidation."

It is a consolidation in the same sense that the false membrane a little farther up in the tube caused by a process very similar, but caused by a different bacilli, which is also a constitutional infection with a local manifestation, and all of you have witnessed the wonderful larval metamorphosis after injecting the anti-toxin in diphtheria. *This is detoxication, Mr. President. Now nature begins to load her dump carts and clean up. She dare not touch it before.* Those wonderful results produced by radium you saw at our last meeting were the results of detoxication.

SYMPTOMS

After they enter the system and are planted upon suitable soil and begin to germinate, you begin to sicken. It spreads through the system like a nauseating taste upon the tongue, causing at first a slight indisposition that is hard to understand or define. This only lasts until they break through and get into the circulation.

This, as a rule is attended by a severe rigor, lasting from one-half to one hour; patient freezing while his temperature ranges from

103 to 105. The rigor is caused by injecting into the circulation the cocci and the elaboration of their toxins. It produces a shock, the extent of which will depend upon the amount injected.

You now have a harsh, dry skin, burning cheek, flushed face, restlessness, headache, delirium and rapid pulse. In the wake of this ere long you will have thoracic symptoms, rapid breathing, stabbing pain at seat of engorgement, a harsh cough caused by the drying up by the fever of the bronchial secretion. In twenty-four to forty-eight hours, as a rule, the hemorrhagic expectoration, termed prune juice expectoration, which is produced by harsh, dry cough rupturing some of the bronchial arteries. This is one of the classic pathognomonic symptoms; later you have a mixed and copious expectoration composed of germs and the products of disintegration; a foul tongue, anorexia, great thirst, pulse ratio lost, etc.

In massive or obstructive form you have accentuation of the second pulmonic sound soon followed by acute dilatation of the right heart, which is caused by the toxemia; producing a stagnant pool that you must empty or lose your patient. *This is the condition for which he bled.*

Why the bronchial tree and the bronchial mucous membrane should emerge from this conflagration intact is one of nature's wonders, that is yet to be explained. They tell us the constant shedding of the mucous layers prevents the permanent lodgement of the cocci, but again they tell us that the local susceptibility is increased by defective blood supply, this you surely have here.

It is now up to us to fight this disease, (1st) by recognition of its true nature; (2nd) that 'tis not a disease of uniform etiology; (3rd) that the same pneumococci may produce a lobar, lobular, or bronchial lesion; (4th) that other bacilli may produce a similar condition; (5th) by finding out which is the offending cocci.

TREATMENT

Absolute rest in recumbent position. Fight the toxemia because it is the agent that kills, no matter under what name nor in what organ the fatal shot is discharged. We can stop pounding and beating them in the ribs, we can ignore red and gray hepatization, the student's night-mare. If we can find the antitoxine for this disease, hepatization, and all the bacterial exudes will shrink up, absorb and be expectorated, but remember, this will all take place after the crisis or antitoxical shot, not before. The clinical finding; viz: pulse, temperature and respiration will tell

us this, no matter whether we can locate the crepitant redux or not.

Fight the toxemia by first cleansing and keeping clean the portal of entry, the nasopharynx, by feeding them constantly pure fresh air; by cleansing out the whole alimentary tract, by keeping it pure and sweet by careful supervision of all that goes into it, thus preventing dilatation of stomach, intestinal stasis and the resulting decomposition, that not only increase toxemia but prevents nutrition. By keeping skin and kidneys active, because they have a great load of debris to remove. Keep skin active by hot sponge baths carefully given followed by alcohol rubs, not a little alcohol in a pan of water. Keep kidneys active by systematic use of water. Give as regularly as your medicine. See to it that you know how much they take and pass. Nature has pointed out these routes of elimination to you by giving these drenching sweats, etc., which are so common to this disease at crisis. You all have witnessed these pneumonic floods and their wonderful results. Fight it with diffuse stimulants—*vasomotor and cardiac, not cardiac nor vasomotor depressants*. Do not poison with alcohol, but give it notwithstanding the prohibition wave. Fight it with hot mustard baths and poultices, but for the love of Mike do not pile four or five pounds of patent mud nor other plasters on the over-worked respiratory muscles. Fight it by cutting loose from the old stereotyped treatment that has been a failure. Fight it with modern biologic products, but in their selection, do not go back to the old shot-gun treatment. Endeavor to maintain the phagocytic power of the blood, and not to reduce the opsonic index to the negative phase by their excessive use.

Wounds from Small Projectiles.—Roulland refers to flying scraps of shell or of bullets, slivers of wood or pebbles driven by the force of an explosion. The wounds thus made are characterized by the apparent insignificance of the injury, the depth to which the projectile penetrates, and the rapidity and gravity of the inevitable infectious phenomena. Treatment requires removal of the foreign body and provision for ample draining. He has found hot water of great assistance in treatment of wounds in war, either as local baths or moist dressings or as a spray. It seems to have a wholesome trophic action on bruised and mortified tissues, especially when supplemented with hydrogen dioxide.

CASE REPORT.*

By J. M. HAMILTON, Shawanee, Tenn.

As my name appears on the program for this meeting, I have decided to report a case, which I feel will be of more interest to the society than a paper written by me.

On October 22 last, I was called five miles out in the hills late in the afternoon to see a boy, aged 13 years. His right hand was caught between two cane mill rollers, the hand was completely crushed. I placed a temporary dressing on the member, gave him a hypodermic of morphine and atropia. Following morning at nine, assisted by Dr. Morrison, amputated hand in contiguity at wrist. On October 30, changed dressings, wound doing nicely; November 1st, patient called at office, said he was feeling fine; did not examine or change dressing. November 2, patient called at office and complained of pain at angle of jaws. I found the parotid glands were enlarged and tender; temperature 102 F. Dressing wound which was doing nicely. Ordered patient to go to bed and be quiet for a few days and let me hear from him if anything went wrong. On November 7th I was called; found him still complaining of pain and stiffness at angle of jaws and left testicle slightly enlarged and very painful; wound doing nicely. Heard from him the following day; resting better. Called to see him on the tenth; was suffering no pain aside from testicle which was very tender; had tonic spasms of both legs and body, but could move arms at will; had very good use of masticating muscles; bowels had not acted since the morning of the seventh, and did not act again until the morning of the 12th. While I was there patient wanted to urinate. I noticed in getting out of bed he seemed to be as stiff as a bar of iron. When he was again placed in bed, I caught him at the nape of the neck, and his mother caught him under both legs. We lifted him up and I made pressure on the abdomen, and he still seemed as stiff as a block. The bowels were very much distended with gas; seen patient on the morning of the 12th; bowels had acted freely several times; wound looking fine, temperature normal; could use his jaws freely; body and legs still rigid. Heard from him following day; resting well. Night of the 14th, slept all night. On the 15th was called to see him at 11 A. M. Temperature sub-normal, breathing rapid, almost imperceptible pulse, bathed in perspiration, bowels very much distended; had eaten breakfast, began to complain of pain in the region of the abdomen in about 45 minutes after eating, and died at 3 P. M.

Treatment entirely symptomatic.

*Read before the Bell County Medical Society.

ACUTE SEPTIC PERITONITIS.*

By J. H. CALDWELL, Cincinnati.

Causes and reasons for the symptoms and reasons for the treatment.

After studying peritonitis briefly and realizing the magnitude of the subject and the vast amount of literature that has been written by the masters of our profession, I hesitate to discuss this subject before you this evening. Time nor space will not permit a thorough discussion of the whole subject, therefore I will deal with only two phases of the subject, namely, symptoms and treatment. Many writers have made various classifications of the subject, but I prefer to make only two, namely, local and diffuse, and will deal with them in this brief paper as one, as I think they are only different phases of one and the same disease. I think as Crile does that the symptoms are practically all due to nature's process of resisting the infection. The principal symptoms are, 1st, pain. 2nd, retraction and rigidity of the abdomen. 3rd, position of the patient upon his back with knees and thighs flexed. 4th, distension and tympanites. 5th, accelerated pulse, respiration and increased blood pressure. 6th, elevated temperature. 7th, shallow breathing. 8th, sticky exudate. 9th anorexia and vomiting. 10th, scanty urine. 11th, cold, clammy skin. 12th, leukocytosis and moderate reduction of red cells. 13th, pinched expression. 14th, low blood pressure before death.

Generally speaking these symptoms appear in the order named, there may be other symptoms also, or some of the above named symptoms may be absent in a given case. Suppose we analyze the symptoms, their causes and the reasons they are of benefit to the patient. Take the first symptom (a) Pain. Why should there be pain? There is a very good reason for it, namely, on account of the acute pain the patient will lie still thus there is the least possible amount of trauma to the diseased peritoneum which favors immobilization and localization of the infection.

(b). Retraction and rigidity of the abdomen. The retraction is for the purpose of holding the intestines quiet before distention has had time to occur, when the distention of the intestines occur the retraction of the abdomen is relieved but the rigidity remains.

(c). The position that the patient assumes in bed upon his back with knees and thighs flexed is the most comfortable for the patient and it also prevents traumatism to all parts of the abdomen, so this is another part of nature's scheme in resisting the disease.

(d). Distention of stomach and intestines causing the tympanites, and paresis of the intestines is also a part of nature's process of immobilizing that favors localization of the infection, the distention is due to decomposition of some of the contents of the alimentary canal generally acid in character. And the process of digestion and absorption of food is stopped and will not be resumed until the infection is to a degree conquered.

(e). The increased heart action is due to nature attempting to supply the body tissues with enough oxygen as there is an increased demand for oxygen on account of the increased metabolism going on within the body tissues consequently more oxygen must be supplied and this is one way, that is, by accelerating the blood stream that oxygen is carried to other tissues faster. Also the heart beats faster on account of toxins acting upon the brain, causing it to send out the necessary stimuli for more oxygen and also the increased amount of CO_2 , formed must be carried back to the lung to be eliminated. The increased physical and mental tension together with the increased heart action tends to raise the blood pressure which remains high until recovery takes place or complete exhaustion.

(f). The respiratory movements are accelerated on account of the increased internal respiration, that is, increased interchanges of gases within the blood and other tissues of the body, then on account of the muscular rigidity immobilizing the abdomen and to a great extent the diaphragm and lower ribs, there is necessarily shallow, costal breathing, hence the rapidity of the respiratory movements. The increased heart action and respiratory rapidity in peritonitis, represents about the same phenomena that occurs during violent physical and mental exertion.

(g). Elevation of the temperature is due to the toxemia and increased katabolism and the results of forced conversion of potential energy, into kinetic energy. It is nature's attempt to break down foreign proteins, products of infection and render them harmless. The increased pulse and respiratory rate and fever are characteristic not of peritonitis alone, but of all infections.

(h) The sticky exudate is nature's way of sticking the intestines and other abdominal viscera together or sticking them to the parietal wall thus walling off the infected area from the non-infected parts of the peritoneum.

(i). Anorexia and vomiting are symptoms that are of distinct advantage to the patient as there is an existing paresis or a relative paresis of the intestines as mentioned above, and the process of digestion and absorption of food has been suspended, therefore nature

*Read before the Pendleton County Medical Society.

comes to the rescue again and empties the stomach and often times the upper end of the small intestine by vomiting. Thus the decomposing food that is adding to the burden of the body by producing a ptomaine poisoning is eliminated. And also the existing anorexia is of benefit as the patient could not digest the food, if he did have an appetite and take food it would only lay in the stomach and decompose and again produce ptomaine poisons.

(j). The breathing is shallow on account of pain that occurs when the patient attempts to take a deep inspiration, and also on account of the diaphragm and abdominal muscles being fixed as mentioned above.

(k). The blood picture, that is, leukocytosis and moderate reduction in number of the erythrocytes are the same as that in most acute infections, and due to the same causes: 1st, the toxins act upon the brain and cause nature to send out increased number of phagocytes to reinforce the normal existing army of leucocytes in attacking and destroying the micro-organisms and their toxins at the same time some of the red blood cells are destroyed in the fight with the toxins, hence the reduction in their number.

(l). Scanty urine is due to loss of water by vomiting the diminished intake of water, the pouring out of water with the peritoneal exudate and the failure of water absorption, these phenomena cause a rapid shrinkage of the soft parts, which is most marked in the face, causing the so-called pinched expression, mentioned in the beginning of the paper. The increased metabolism has a tendency to cause acidosis and there is an increased concentration of solids which cannot always be eliminated by the kidneys. The skin in turn, therefore, attempts to take up the burden of eliminating the toxins and products of metabolism hence the perspiration.

(m). In the cases that go on to fatal termination the blood pressure is always abnormally low before death, as it is in all cases of acute infections; this is due to acidosis and exhaustion.

Crile and his associates have shown that there are marked changes going on in the cells in the cortex of the brain, in the adrenals and in the cells of the liver, in patients suffering with septic peritonitis. He has shown also that the same changes take place in people that are submitted to prolonged mental or physical strain, anxiety, fright and in all forms of exhaustion. He has produced the same phenomena by animal experimentation by injecting directly into the blood stream a weak acid solution, he gave another animal large doses of morphine then injected it with the acid solution and found that these changes

did not take place except to a very slight degree, in fact the cells remained almost normal. The above-mentioned changes in the cells range from a slight hypochromatism, changes in cytoplasm of the cells, cloudy swelling and even to degeneration. Thus we see that it is in reality an acidosis, which is caused by the increased metabolism, to be more definite, I should say increased katabolism.

TREATMENT.

If the above mentioned phenomena causing the symptoms of acute septic peritonitis are true, common sense will tell you what the general line of treatment should be. First and foremost drainage and the Fowler position or any position that favored drainage toward the pelvis should be instituted as soon as possible, and the cause of the infection should be removed at the same time the drainage operation is done, if it is necessary to make an abdominal incision to accomplish the drainage as is generally the case. The appendix is the most common cause of septic peritonitis and should be removed if the patient is not in an extremely bad physical condition at the time of operation, it can be done gently and very quickly if an experienced surgeon is operating; no other kind of a surgeon should attempt these operations as I know of no other operation that requires more surgical skill and quick accurate judgment than these cases of acute septic peritonitis caused by appendicitis or perforating ulcers of the stomach, duodenum or other portions of the intestinal tract. In cases due to perforating ulcer the perforation should be closed quickly with a purse-string or a Lambert suture, and if the intestinal wall around the perforation is too fragile to hold the stitches it is best to reinforce the patch by sewing a piece of omentum over the perforation.

When should we operate? Generally speaking I should say as soon as possible after the diagnosis is made. I would not adhere to this rule in all cases as for instance a patient may be suffering from severe shock when first seen, due to perforated ulcer of stomach or duodenum, or a patient may be almost exhausted after being moved a long distance upon a railroad train to the hospital, in such cases it may be better to postpone the operation temporarily and give salt solution and stimulants until the patient has had time to react to the stimulants.

In the female when the pelvic peritoneum is the seat of infection you can generally drain by making an incision posterior to the cervix and drain through the posterior cul de sac.

2nd. It goes without saying that absolute rest in bed is essential to conserve all the patient's energy for resisting the infection.

The patient should not only have physical and mental rest but should also have rest from his own body metabolism. There is only one group of drugs known that will produce this mental and physical rest and put metabolism almost at a standstill and that is the opiates and the best of this group is morphine, therefore liberal doses of morphine should be used as it conserves energy by its sedative effect upon the central nervous system and prevents acidosis and exhaustion.

3rd. Absolutely no food should be given per mouth, as it will not be digested and for reasons mentioned before, will only do harm. A person that is attacked with acute peritonitis must fight the infection with the potential energy that he has in store before the attack, as he can not assimilate food given by mouth and rectal feeding is of little avail.

4th. A solution of sodium bicarbonate and glucose should be given slowly per rectum. The sodium bicarbonate solution neutralizes the acidosis and helps the action of the kidneys and heart, the glucose supplies a limited amount of nourishment. If the above alkaline solution is not absorbed readily it is well to alternate with salt solution per rectum.

5th. Vaccines are also a valuable adjunct in the treatment of septic peritonitis. The autogenous vaccines would probably be the best to use were it not for the time consumed in making or preparing them, which is a disadvantage as the disease is so acute that time plays an important role. The writer has had no experience with the use of autogenous vaccines in these cases, but has used the stock vaccines with success. The mixed staphylococci and colon bacillus vaccines are generally indicated as they are the micro-organisms commonly found. In the writer's experience the staphylococci predominate in septic peritonitis, as they do in the majority of suppurative processes in the human body.

6th. Strychnine, digitaline and adrenalin are often used hypodermically.

7th. Hot packs are also to be used to an advantage in some cases.

In conclusion, after a careful consideration of the subject, we find that peritonitis is a surgical condition and can only be successfully treated surgically; therefore, the surgeon should be called early.

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NEWS ITEMS AND COMMENTS

Dr. J. E. Williams, of Morton's Gap, has gone to Chicago to take a two month's post graduate course in medicine.

Dr. G. C. Nickell, of Morehead, has moved his residence and office from Combs property to that of H. M. Logan, opposite the postoffice.

Dr. P. K. McKenna is at Rochester, Minn., attending a ten days' clinic under the personal direction of the famous surgeons, Mayo Bros.

Dr. George F. Doyle, wife and little son, of Winchester, spent the week-end with Mrs. Sarah Drake in Mt. Sterling.

Miss Josephine Fithian, daughter of Mrs. Frank Fithian of Lexington, was operated on for appendicitis at Norton Infirmary, Louisville, by Dr. Louis Frank.

Dr. Charles A. L. Reed, of Cincinnati, O., in an address before the semi-annual meeting of the Medical Society of the Missouri Valley, announced the discovery of a germ which he asserts causes epilepsy.

Dr. J. Cray Martin came in Wednesday morning, April 9th, from an extended visit to the West. During most of the time, he was in Tucson, Arizona.

Dr. Wilhoit and family have moved from Leesburg to Pleasureville, Henry county, where he will continue to practice his profession. Dr. Blount is now the only physician in Leesburg.

An interesting address on "The Economic Waste Due to Preventable Disease and Premature Deaths" was made by Dr. J. Hunt Stucky, of Lexington March 23, to a large audience in the circuit court room. The lecture and the excellent musical program which accompanied it were arranged by the Woman's Club.

Dr. R. M. Allen, for sixteen years director of food and drug department of the Kentucky Agricultural Experiment Station, will leave for New York to assume the directorship of the Ward Bakery company. He resigned as head of the department at Lexington, but instead of his resignation being accepted he was given a year's leave of absence.

Dr. J. Scott Goodpaster, who for the past year has practiced his profession in Mt. Sterling, has made his arrangements to return to Owingsville in the near future to practice and at the same time engage in farming. During their residence

in this city Dr. Goodpaster and his estimable wife have won for themselves a very warm place in the hearts of their neighbors and many friends and it is with the most sincere regret that the news of their intended departure will be received.

The residence of Dr. F. M. Williams, physician and financier, at Paintsville, was destroyed by fire. Most of the contents were lost. The total loss is about \$5,000, with \$3,000 insurance. Other residences adjoining were saved by bucket brigades.

Drs. Ferguson of Austin, Hughes of Fountain Run, Depp of Hiseville, Comstock of Horse Cave and Acton and Howard of Glasgow, will go to Chicago, where they will take a post graduate course for a month. Mrs. Howard, Mrs. Depp and Mrs. Acton will accompany their husbands, to keep the young men in line.

Dr. H. R. Henry left March 10, 1916, for New York to attend the Polyclinic. He will return in about six weeks, coming by Cleveland, O., to take in the clinic there. During his absence the Henry Infirmary will remain open for the use of the local physicians and the public. The present nurses will continue in charge.

An appreciative audience heard the program of the Woman's Club at the court house. Dr. J. A. Stucky, of Lexington, gave an interesting address on "The Economic Waste Due to Preventable Diseases and Premature Death," showing that these diseases cause a great financial loss, aside from the suffering and sickness otherwise entailed. Dr. Stucky is waging a successful war against trachoma in the Kentucky mountains.

The Clark County Medical Society met with Dr. John A. Snowden Friday night February 25th. "The Old-time and Present-day Treatment of Pneumonia," was the topic of the occasion. Dr. Howard Lyon led in the discussion, followed by Drs. Shirley, Bush, Browne, Doyle and Snowden. Evidently great progress has been made in the past few years in the treatment of this much dreaded disease. The next meeting of the association will be held in the office of Dr. Doyle on Friday night, March 24th.

The Owensboro Medical Society met in regular session at the office of Dr. C. J. Lockhart, at 7:30 o'clock Tuesday evening, March 15, 1916. A very interesting program was carried out. Dr. T. J. Townsend read a paper on "Blunders," followed by reports of cases from Drs. W. H. Strother and J. W. Barnhill.

Muhlenberg county physicians report splendid results from the free trachoma clinic conducted at Greenville by Dr. Pirkey, of Louisville and Dr. Bailey, of Madisonville. This is the second tra-

choma clinic Muhlenberg county has had. It is estimated that there were originally 2,000 cases in this county.

A number of the physicians of Catlettsburg received an official letter from the French Surgery headquarters, asking for financial aid in restoring the implements and other professional substance which have been lost and destroyed in the present European war.

The local physicians are manifesting quite an interest in the campaign that the French physicians have launched and it was stated that the Catlettsburg doctors would take their part in the relief and would solicit a fund here in the city for that purpose.

Dr. T. F. Miller of Goodnight has gone to New York and the Johns Hopkins University in Baltimore, at which places he will spend three months or so in post graduate work. Dr. Theodore Jones of Guthrie, has leased Dr. Miller's residence in Goodnight, and will be on hand by the last of the week, to take up the practice of medicine at that place. Dr. Jones comes highly recommended and Dr. Miller assures us that he is first class and can be trusted. We are not informed where Dr. Miller intends to locate when he completes his post graduate course, but we have a suspicion that he will locate in Glasgow, and we sincerely trust we may not be disappointed.

Dr. E. A. Stevens, of Mayfield, who recently retired from practice, and who has returned from a visit of several weeks in Florida, is improving in physical condition, as his appearance will indicate. The doctor says one of the great blessings in retiring from practice is that when he awakes every morning he knows that he is his own boss and need not get up until after breakfast if he doesn't want to. Dr. Stevens has been associating with sick folks so much for the past quarter of a century we imagine it will be rather difficult for him to refrain from further doing so.

Entire charge of the surgical business of the Louisville & Nashville Railroad Company, including the work from the L. C. & L., Kentucky division, Lexington & Eastern division and that coming from the Eastern Kentucky division, has been given Dr. R. C. Falconer, of Lexington. Dr. Falconer has for the last twenty-five years been the resident surgeon for the Louisville & Nashville, C. N. O. & T. P. and the Southern, and this recent reward is further recognition of his ability in his special line.

The Knights of Columbus, of Bowling Green were given a rare treat in an illustrated lecture in the lodge room by Dr. A. T. McCormack and

W. L. Heizer, which proved both instructive and interesting. The subject was "How to Keep Kentuckians Alive and Effective."

The members had been previously advised of the lecture, and a large attendance was present. Dr. McCormack lectured and Dr. Heizer illustrated by means of the stereopticon.

At the close of the meeting a rising vote of thanks in appreciation of the efforts of both Drs. McCormack and Heizer was extended the honored guests.

The most serious automobile accident which has ever occurred in Central City happened a few nights since when Dr. L. D. F. Whitaker was seriously injured by being struck in the back by an automobile driven by Mr. Earle Martin, who, with Talmadge Rogers, were driving the Rogers car. Dr. Whitaker was entering the store of Leslie Hale, the car being backed across Main street from the First National Bank corner; suddenly it jumped and turned for the Hale corner, the driver losing control, catching Dr. Whitaker and dashing him against the door facing and the back of the car mashing his body. The car rebounded and released the body. Immediate attention was given the patient. It was found that severe cuts had been inflicted on the face, top and back of the head, and serious contusions and a broken cheek bone were located. The physicians decided that it would be best to get the patient to a hospital, and he was carried to Louisville on the early train. Reports are favorable, and unless unforeseen complications arise, recovery will be rapid.

Dental inspection of Hopkins County schools is being inaugurated under the direction of the Hopkins County Public Health League. Miss Henry, the county visiting nurse, together with one of the progressive dentists, go to the schools, making examination of each student, filling out a blank showing condition found. The blank can be taken home for parents to see and later to whom the child wishes to go, so that he may see the result of the school examination. This is a great work and statistics go to show that the dental inspection in the schools of our cities has been effected and the necessary work attended to there is a very decided increase in deportment of the student body. This is not done to help the dentist. No, no, but to help the public. You can ask your teachers, the resident nurse or your family physician. You will learn that the best real progressive dentists of the county are giving this work a portion of their time and doing it gratis.

On March 30, 1916, Dr. C. J. Renfro, of Pleasureville, the oldest physician in Henry county, died of hardening of the arteries; following an illness of about a year. He is survived by one

son, J. Curtis Renfro, of Pikeville; one daughter, Mrs. Mattie Scott, one grand-daughter, Mrs. Wm. Hinkey, of Pleasureville; two brothers, Dr. Warren Renfro, of Sharpsburg; Byron Renfro, of Bowling Green; and one sister, Mrs. Lucy Latta, of Harrodsburg.

Dr. Renfro was born on a farm in Mercer county. He was a graduate of Jefferson Medical College, Philadelphia and came to this county and began the practice of medicine forty-nine years ago.

He married Miss May Hornback, of New Castle, December 18, 1869, who died fourteen years ago.

He had been a member of the Presbyterian Church for more than fifty years, and lived an upright life.

He served with distinction in the Confederate Army, where General Basil Duke was wounded and in prison on Johnson Island for months.

The funeral was held at the Pleasureville Presbyterian Church, and the burial was in the Eminence cemetery.

The out-of-town relatives were his son, J. Curtis Renfro, his brother Warren Renfro; his sister, Mrs. Lucy Latta, and two nephews, C. M. Jackson, Ashland, and C. M. Shrader, Louisville.

The handsome residence of Dr. F. M. Williams was destroyed by fire March 25. The fire started from a defective flue or from live electric wires on the second floor. Some of the furniture was saved but was broken up considerably. For a time it looked as though other houses would burn but by hard work the crowd saved the other houses close by.

Dr. Williams had his office located in his residence and most all the large stock of drugs was destroyed. He moved his family into the house recently vacated by Mrs. Burns Conley.

The house was partly covered by insurance as was also the furniture. It is said Dr. Williams will build a brick house on the lot.

One swallow doesn't make a summer; and one test doesn't constitute a guarantee of satisfaction. There are always a number of aspects to every article of utility, and although it may measure splendidly up to one of these aspects, if it fails in all the rest it cannot be said to be a very efficient article. "Best by every test" is the measure of efficiency. That is the measure by which Calumet Baking Powder excels. Chemically, physically, physiologically, and domestically, it fulfills all the demands of modern science and art. It is chemically correct, physically pure, physiologically wholesome, and domestically efficient and dependable. If you can think of any other quality that ought to characterize a first class baking powder, no doubt the manufacturers will see to that, too. Personally, we can't. It

looks to us as if a baking powder that can make good on those four claims is about as nearly perfect as a baking powder can be. However, you know the old proverb—"the proof of the pudding is in the eating of it."—Calumet will stand that test, too.

Due to an attack of grip, causing a weakening of the heart valves, Dr. R. S. Hart, aged 73, for many years a well-known practicing physician in Fayette and Woodford counties, died at his home eight miles from Lexington on the Versailles pike, following an illness of three weeks.

Dr. Hart was a well-known Confederate veteran, having been a lieutenant of the 22nd Alabama regiment, under General Bragg, during the Civil war. He studied medicine at Baltimore immediately after the war's close, and then came to this State, where he located near the Woodford county line. He has lived there, practicing his profession, ever since.

He was a devout member of the Presbyterian church and highly esteemed both professionally and socially.

Besides his wife, Mrs. Rebecca Hart, he is survived by four children.

Funeral services for Dr. W. L. Rodman, eminent physician and cancer specialist of international repute, who died in Philadelphia of pneumonia, was held in Frankfort. The services were held at the cemetery immediately following the arrival from Louisville of an L. & N. train bearing the body. The ceremony was in charge of the Rev. J. H. Young, of Bowling Green, who was Dr. Rodman's pastor when he was a resident of Louisville.

A delegation of Lexington physicians attended the funeral at Frankfort as a last mark of their esteem for their co-worker. Many local physicians are former pupils of Dr. Rodman.

The survivors of Dr. Rodman in Kentucky are Mrs. Miles P. Rehorn, of Lexington, and his mother, Mrs. John Rodman, and two sisters, Mrs. Clarence S. Grubbs and Mrs. Hugh Leavell, all of Louisville.

The ballbearers were Drs. Horace Grant, Ed Grant, J. M. Ray, Lewis McCurtry, Milton Board, W. O. Roberts and H. N. Leavell, of Louisville; J. N. McCormack, of Bowling Green; David Barrow, of Lexington, and J. P. Stewart, of Frankfort.

The Carlisle County Medical Society held one of the most interesting meetings since its organization at Arlington last Tuesday. The main subject under discussion was la grippe, which has been an epidemic throughout the entire country this year, and which has taken an enormous toll of life. Ways and means of combating the disease was given a thorough discussion. This malady is one of the most difficult that medical

science encounters, for once it attacks its victims it usually has to run its course, there being very little relief for the patient while in its grasp. However, our physicians have been very successful in the treatment of the disease, no fatalities from it having occurred so far as is known. The various other diseases that beset the human family were discussed by the society portend to be of much good for the commonweal as a result of exchange of views. The attendance of members at this session was slight, but those who were present report a highly interesting session.

A number of physicians and citizens met on March 10th at the office of Dr. J. B. Hibbits to discuss ways and means for building a hospital for general practice in Union City. The idea first suggested was to acquire property to the value of four or five thousand dollars and add to that as time and opportunity afforded. But others thought that Union City and surrounding country needed and could easily afford better advantages and therefore advised the consideration of a hospital investment of about \$10,000. One of the physicians present remarked that the physicians alone would subscribe \$2,500, and other suggested if that be a fact double the amount could be easily raised and the city would then supplement the subscription with a liberal amount.

At any event there was a strong sentiment that a more commodious and better equipped hospital was needed in Union City for the use of the physicians of the county. The present Physicians and Surgeons Hospital quarters are very good indeed, but not ample by any means for the practice of all the physicians and for the accommodation of our people are constantly needing hospital advantages.

Louisville will be represented at the Southern Sociological Conference, to be held in New Orleans April 12 to 16, inclusive, by Max Barker, Miss Harriet E. Anderson, Miss Jessie Grauman, Charles Strull, Miss Frances Ingram, James B. Brown, Oscar Fenley, Miss Pauline Witherspoon, Miss Marie Durning, Miss Rose Fleischaker, the Rev. Dr. Aquilla Webb, the Rev. Dr. W. W. Landrum and the Rev. Dr. E. L. Powell. They were appointed by Acting Mayor J. William Miller several days ago.

The Rev. C. S. Gardner also will attend the conference and will deliver an address on "The Minister As a Health Propagandist." The Rev. Mr. Gardner has been teaching sociology at the Southern Baptist Theological Seminary for a number of years and has given the subject much thought and study. In fact, his interest in sociological matters was partly responsible for his leaving the ministry, in which he was engaged in Richmond, Va., before coming to Louisville.

Since then he has written a book on the subject, the title of which is "Ethics of Jesus and Social Progress."

The licenses of Dr. Alphonse Aratus, of Covington, and Dr. P. R. Peters, negro, of Louisville, were revoked by the Kentucky State Board of Health at its bimonthly meeting at The Seelbach. They were charged with prescribing drugs for other than legitimate purposes.

Charges of the same nature against Dr. Theodore Sallee, of Covington, were filed away with leave to reinstate when physicians and druggists testified that Dr. Sallee had been guilty of such an offense only once, and when he swore to an affidavit he never would prescribe cocaine or morphine again.

The case against Dr. M. L. Bryant, of Wayne county, summoned before the board for alleged failure to report births to the State Registrar of Vital Statistics, was dismissed. He appeared with nineteen birth certificates, covering his practice during the past two years, and said the State Board's rule requiring the filing of birth certificates never had been called to his attention. The board ordered the State Registrar of Vital Statistics to inaugurate proceedings against any physician who fails to report all his births and deaths before March 15, this year.

The license of Drs. Aratus and Peters were revoked on the ground they had been guilty of grossly unprofessional conduct, and in compliance with a rule recently adopted by the board. J. N. Phillips, Vice Mayor of Covington, defended Dr. Aratus. He was found guilty, however, on testimony that he had pleaded guilty in a criminal court to a charge of prescribing morphine for other than a legitimate purpose, and on testimony that he was a frequent violator. Evidence also was introduced showing his license had been revoked in Ohio several years ago. Dr. Peters recently was convicted in Louisville on three indictments charging him with illegally prescribing opiates. Every member of the State Board of Health was present at the meeting.

The people of Elizabethtown and vicinity enjoyed a rare treat when Dr. W. L. Heizer, of Bowling Green, State Registrar of Vital Statistics, addressed them.

Dr. Heizer came at the invitation of the Woman's Club and gave an excellent address upon "The New Health." He spoke in the Presbyterian church and was introduced to an audience composed of many Elizabethtown's and vicinity's most progressive and intelligent men and women. Dr. Heizer was introduced by Dr. Aud, of Cecelia, in his always graceful, scholarly and effective way. He dwelt at considerable length upon the fact that to live long and well we must know how to care for our bodies, which we can only do by studying the laws of health, and hav-

ing learned same studiously observe them in our daily living. He congratulated the state upon having so able a health officer as the speaker of the evening and felicitated the Woman's Club upon being able to present so forceful and able teacher.

Dr. Heizer, in his talk of over an hour, spoke principally upon preventable diseases. He gave statistics showing the percentage of fatality of the various diseases in Kentucky as compared with other states south of us. He brought the test nearer home and then compared the death percentage in Hardin county with other counties in Kentucky. He stated and proved by figures that the death rate from typhoid fever and consumption in our county is nearly double the average death rate in the State. He inquired for the cause and answered it by saying it is because of almost criminal neglect of our bodies together with insanitary conditions we permit to exist in our communities.

The audience appreciated the fine lecture very much. It was couched in the best of language, every word fitting in as though it was especially made to convey the particular idea advanced. The speaker's manner was most pleasing and his delivery natural and dignified.

As a token of their appreciation the audience gave Dr. Heizer a rising vote of thanks.

The Lincoln County Board of Health met in the county court room at 10 A. M., Tuesday, March 21st with the Lincoln County Medical Society to discuss the prevention of blindness in the newborn babe and trachoma. Dr. W. B. O'Bannon gave a lecture on ophthalmia neonatorum, and Dr. J. G. Carpenter, one on trachoma, to the physicians and mid-wives of the county. The subjects were illustrated with plates and drawings of the natural eye and the sequels of the diseases from a pathologic view. Drs. Pipes, of Moreland, Roberta Carpenter, Hustonville, Southard, Brown and Peyton, of Stanford, Dr. J. B. Kinnaid, of Lancaster, and six colored mid-wives and Dr. Moore, of color, were present and entered freely into the discussions. The midwives expressed a vote of thanks for being called to be instructed and gave the strictest attention and gave their experiences and observations in the practice of midwifery and were made happy in being taught how to prevent blindness in the new babe.

They were well dressed, showed good manners and common sense. The law now requires every physician and mid-wife attending a case of labor to instill 3 drops of a 1 per cent solution of nitrate of silver into the eyes of every babe born, and should any soreness of eyes follow, the Health Officer is to be notified within six hours, if the patient is in town, and twenty-four hours, if in the country.

Seventy-five per cent of the blindness in the

new babe is due to ophthalmia neonatorum and 75 per cent of blindness in other people is due to trachoma. It behooves the tax payers to take great interest in the above subjects, as they are taxed to keep up the institution for the blind.

Trachoma is so prevalent in certain sections of Kentucky, that the U. S. Government has established hospitals at various points by competent men to help stamp out the disease of trachoma, yet every physician worthy of the name of doctor should be able to successfully treat this disease.

Dr. Pipes read a paper on the sequelae of "la grippe," dwelling at large on sinus, laryngo-tracheal inflammation, ear and brain complications and especially on labor pneumonia. The essay was freely discussed by Drs. O'Bannon, Peyton, Brown, Southard, Kinnaid and Carpenter.

The following were placed on the program for the next meeting at Hustonville: Dr. Weddle, "Complications of La Grippe"; Dr. Childress, "Treatment of La Grippe"; Dr. J. G. Carpenter, "Treatment and Pathology of Colles and Barton's Fractures by Extension and Counter Extension." It is an easy task to have a good County Medical Society—a post graduate course at home, when every member becomes interested and takes a part, the greatest good to the greatest number. We owe this to our patients and humanity to keep posted.

Fibrin Injections to Promote Development of Callus.—In case of delayed healing of fractures and for pseudarthrosis Bergel makes local injections of fibrin obtained from blood drawn from horses. He gives a number of roentgenograms which apparently demonstrate that by this means the production of callus is stimulated and pseudarthrosis corrected.

Abortive Treatment of Syphilis.—Van Zeissl states that among his last series of 3,000 syphilitic patients he has 26 who were given treatment when only the primary sore was evident and there have been no further manifestations to date and the Wassermann has been persistently negative. He urges that when the army disbands, after the war, each soldier should be given the Wassermann test and have a culture made from the urethral secretions. Only when these are or become negative should he be discharged to return home. This is the only way to protect the wives against possible sterility from gonorrhea and the offspring against the taint of syphilis.

THE FORUM

TO THE EDITOR:

I wish to report my councilor meeting with the Nelson County doctors. It is frequently said "The secretary makes the society." In Nelson county it seems there is a mutual spirit of progressiveness among the M. D.s, and while Nelson has in the person of H. D. Rodman, one of the best county secretaries in the State, it also has wide-awake doctors. I wish to compliment the essayists, every one of whom were present with most excellent papers—papers worthy a metropolitan program. Please say to the other county secretaries in my councilor district that I would gladly visit them and listen to like efforts by them.

I would like to visit the profession in each of my councilor counties and then resign the work to some one more worthy.

C. Z. AUD.

TO THE EDITOR:

Whereas, the Franklin County Medical Society desires to express its great loss to the profession in the death of Dr. Rodman,

Resolved, that this society honors him as one of its charter members and desires to express its deep sorrow at his sudden death, at the height of his usefulness, in the prime of his life and at the zenith of his professional success, enjoying the supreme limit of honor, justly acknowledged by the profession and at the attainment of the presidency of the American Medical Association and to express its sympathy and extend its condolence to his bereaved family.

Be it further resolved, that the Franklin County Medical Society attend his funeral obsequies in a body and that a copy of these resolutions be spread upon the minutes of the society and also furnished to the members of the family, to the KENTUCKY STATE MEDICAL JOURNAL and to *The State Journal* with a request for their publication.

DR. J. G. SOUTH, President.

DR. N. M. GARRETT, Secretary.

TO THE EDITOR:

In the April issue of the JOURNAL, in the proceedings of Carlisle County Medical Society, page 228, my initials are given as H. T. It must have been a typographical error as our secretary, Dr. Mosby, knows my name as well as he does his own. In writing for publication I always give my first name in full. Please correct this error in the May issue. Kindly call especial attention to it.

ROBERT T. HOCKER.

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NEXT MEETING STATE ASSOCIATION.
HOPKINSVILLE, 1916

COUNTY SOCIETY REPORTS

Barren County—Because of the inclement weather, and bad roads, the attendance at our January and February meetings was small, but not without interest, as we had the usual clinical reports, and animated discussions. A committee has arranged an interesting program for each meeting during the year, copies of which will be sent as reminders to each member just before the regular meetings.

C. C. Howard's paper on "Local Anesthesia," read at our January meeting, presented some points of special interest.

J. M. TAYLOR, Secretary.

Barren—The Barren County Society Medical Society met in the office of Dr. Botts, March 15, 1916, with the following members in attendance: Carroll, Botts, Porter, Turner, Taylor, Smock, and Jordan.

The meeting was called to order by President S. J. Smock.

The reading of the minutes of the last meeting was deferred.

There being no papers, clinical cases were called for.

F. G. Carroll reported an interesting case of amputation of both legs below the knees necessitated by a railway injury. A gangrenous condition of one leg, called for a second amputation, which he performed successfully: but owing to general conditions, he regarded the patient's recovery as doubtful. He promises more details of the case hereafter.

There being no further business, the meeting adjourned to meet in Glasgow, April 19, 1916.

J. M. TAYLOR, Secretary.

Christian—The Christian County Medical Society met in regular session at the Avalon on March 29, 1916.

The following members were present, Drs. Rice, Beazley, Woolery, Dade, Watt, Wright, Gaither, Sargent, Southall, Lacy, Lovan, Keith, Bell, Williams, Caudle, Sandbach, Reynolds, Southall, Radford, Harned.

After the reading of the minutes, reports of cases was taken up.

W. S. Sandbach, presented an interesting case, which was diagnosed as a tubercular osteomyelitis of ribs on left chest.

O. E. Wright presented an interesting case of "Tachycardia—Dilated Heart," following a case of typhoid fever.

J. H. Rice and G. W. Logan reported interesting cases of "La Grippe with Meningeal Complications."

G. W. Lovan reported several case sof this type occurring in his locality.

H. C. Beazley presented the paper of the even-

ing, his subject being "La Grippe." The paper was not lengthy but was an excellent one.

As it was such a late hour, Dr. Dade's paper on "Tonsillitis," was postponed until April.

Eggar Riley's application was received for membership.

The following committees for the State Meeting were appointed:

Railroad Committee—F. H. Bassett, H. C. Beazley.

Hotel Committee—Drs Thomas, Chairman; Stephens, Bell, Rice, Stites.

Entertainment Committee—J. L. Barker, Chairman; F. M. Brown, J. G. Gaither, Randolph Dade, W. W. Durham, W. S. Sandbach, E. L. Gates.

Committee on Arrangements for Time and Place of Meeting—F. M. Stites, Chairman; J. E. Stone.

Reception Committee—J. B. Jackson, F. H. Bassett, F. W. Blakey, R. W. Brandon, O. L. Barnes, J. J. Bachus, T. P. Allen, M. E. Croft, D. H. Erkiletian, W. R. Fry, C. M. Gower, G. N. Grace, W. A. Haynes, J. W. Harned, J. E. Johnston, G. W. Lacey, G. W. Lackey, G. W. Loran, O. E. Wright, Wm. Williams, N. C. McGraw, R. F. McDaniel, J. R. Paine, S. J. Rollins, A. Sargent, H. P. Sights, H. S. Sanders, W. E. Reynolds, L. A. Tate, C. B. Woosley, M. W. Rozzell, Stanley Stroube, E. T. Riley.

After the appointment of the committees the society adjourned until the April meeting.

J. W. HARDEN, Secretary.

Clark—The Clark County Medical Society held its annual meeting at the office of Isaac Brown on Friday, December 31st, 1915. W. O. Bullock and F. H. Clark of Lexington, were in attendance.

W. O. Bullock read a splendid paper on "Surgical Treatment of the Vascular System."

The following officers were elected for the ensuing year:

John A. Snowden, President; Howard Lyon, Vice President; H. R. Henry, Secretary and Treasurer.

Delightful refreshments were served in the dining-room of Dr. Isaac Brown; after which the society adjourned for dinner at the St. George Hotel.

Our society meets twice monthly, the second and fourth Friday of each month. Our annual dues were raised from \$3.50 to \$5.00, which after paying State dues leaves a small amount in the treasury to meet current expenses. The sum of twenty-five thousand dollars (\$25,000.00), has been subscribed with which to build a city hospital. A beautiful and convenient site on Lexington Avenue has been purchased. Mr. J. W. Crone, architect, is busily engaged in drawing plans and specifications for the building, and in a short time the ground will be broken preparatory to erecting this much needed institution.

The Hospital building will cost approximately from \$15,000.00 to \$17,000.00

I. A. SHIRLEY, Secretary.

Clark—The Clark County Medical Society held its regular January meeting with E. R. Bush, and was taken up in the discussion of La Grippe, and formulating plans for our new hospital.

G. F. Doyle was elected as school inspector for the public school children.

I. A. SHIRLEY, Secretary.

Clark—The Clark County Medical Society met in regular session in February with Howard Lyon. "Ophthalmia Neonatorum," its medical and legal aspect, was the topic for this occasion.

O. R. Venable opened the discussion with a very interesting talk, dealing principally with the medical aspect of the disease.

I. A. SHIRLEY, Secretary.

Clark—The March meeting of the Clark County Medical Society was held in the office of Dr. John A. Snowden.

Howard Lyon led the discussion on "Pneumonia, the Old Time and Present Day Treatment."

A number of particularly interesting cases were reported by the various members of the society. This proved to be one of the most interesting sessions of the New Year.

The next meeting will be held Friday, March 24th in the office of Dr. G. F. Doyle.

Our Secretary, H. R. Henry, is in New York, taking a special course in surgery.

Our usual attendance is from eight to fifteen, while there should be fifteen or twenty. Physicians who habitually neglect to attend the meetings of our medical society, do not realize the great opportunities for helpfulness, and social pleasure they miss. It has been our observation that the doctor who makes a habit of attending the meetings of the medical society is the one who is the best qualified to practice his profession.

I. A. SHIRLEY, Secretary.

Daviess—The Daviess County Medical Society met at the county court room, Owensboro, at 10 a. m., March 21st.

Twenty-nine members were present.

The President, George L. Barr, was unavoidably absent, and the same happened to the vice president, John M. Clayton. C. H. Todd was called to the chair, and presided with his usual dignity and grace.

The minutes of the last meeting were read.

R. W. Connor, of Owensboro, was admitted to membership.

Colonel L. M. Maus, Secretary of the State Tuberculosis Commission, was present and, at the invitation of the society made a very interesting

talk of 25 minutes. His suggestions were well received and he was given a rising vote of thanks.

I. J. Hoover read a paper on "Some of the Uses and Abuses of the Obstetric Forceps."

R. N. Filiatrean read a paper on "Country Obstetrics."

These papers were quite interesting and were discussed together by nearly all present.

H. K. Orsburn read an interesting paper on "Uremic Poisoning." It was discussed by O. N. Rash.

S. Lambert reported a case where the umbilical cord was wrapped twice around the child's neck. The cord was torn asunder and bled freely. In the discussion one case was reported where the cord was coiled six times around the neck. Cord not torn and child resuscitated.

J. J. RODMAN, Secretary.

Lyon—The Lyon County Medical Society met in the parlors of the Cumberland Hotel, Tuesday, March 21st, 1916, at 2:30 p. m.

The minutes of the previous meeting were read and adopted.

The following members were present: Drs. Linn, Purdy, Kingsolving, Travis and Travis. On account of the presence of C. E. Purcell, of Paducah, the regular program was dispensed with, and through the courtesy of the principal and teachers, a clinic on "Trachoma," was held from the pupils of the Eddyville Graded School for benefit of the society and pupils. Seventeen per cent of the pupils were found to be effected with this malady. Dr. Purcell gave a lecture on this disease which was appreciated by all who were present and we hope will result in much good being done in the care and prevention of trachoma.

F. M. TRAVIS, Secretary.

Nelson—The Nelson County Medical Society held its regular quarterly meeting in the office of Dr. H. E. McKay on Wednesday, March 29th. Called to order by President McKay. The minutes of the last meeting were read and approved. The following physicians were present: Drs. J. J. Wakefield, S. B. Crume, Bloomfield, J. I. Greenwell, New Haven, B. C. Gore, R. H. Greenwell, H. E. McKay, A. L. Thomas and Hugh D. Rodman, Bardstown; G. C. Hall and Guy Aud, Louisville; S. H. Ridgway, Shepherdsville, and last but by no means least our Councilor, C. Z. Aud, Cecelian.

A good program had been arranged and was carried out to the letter.

Hugh D. Rodman read a paper on "Diphtheria a Half-Century Ago."

J. I. Greenwell read a paper on "Diphtheria Now."

Gaylord C. Hall read a paper on "The Effects of Diphtheria on the Eyes, Ears, Nose and Throat."

These papers were all discussed together and were freely discussed.

Guy Aud read an interesting paper on "Local Anesthesia," which did not receive much discussion owing to the arrival of the dinner hour. The society entertained the visitors at dinner, at the Talbott Hotel.

This was one of our good meetings. Our Councilor complimented our meeting, and the interest shown by our members. Mr. Councilor, our next meeting will be on the first Wednesday in June and we are going to have a better meeting than we had on the 29th.

HUGH D. RODMAN, Secretary.

BOOK REVIEWS

The Endemic Diseases of the Southern States.

—By William H. Deaderick, M. D., and Loyd Thompson, M. D., of Hot Springs, Arkansas. Octavo volume of 546 pages with 117 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth 5.00*net; Half Morocco \$6.50 net.

The authors have given careful attention to the subject of malaria, black water fever, pellagra, amebic dysentery, hookworm disease and other intestinal parasites. These subjects are of exceeding importance to Southern men and we recommend this book as it is the only one dealing solely with endemic diseases of Southern States.

Studies in Ethics for Nurses—By Charlotte A.

Aikens. Author of Hospital Management, Primary Studies for Nurses and Clinical Studies for Nurses, etc. 12mo of 320 pages. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$1.75 net.

The purpose of this volume is to emphasize the importance of ethical training of nurses and to aid teachers and students in the study of conduct and duty as it relates to nurses and nursing life. So well does this writer discuss all phases of the nurse's life—her temptations, her faults, her trials in hospital and in private duty, that it cannot help but instill into the heart of every nurse a desire to be true to her own best self and loyal to her noble calling.

A Text Book Upon the Pathogenic Bacteria and Protozoa—For Students of Medicine and

Physicians—By Joseph McFarland, M. D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. Eighth edition, thoroughly revised. Octavo of 807 pages with 323 illustrations, a number of them in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth \$4.00 net.

In the eighth edition of this popular textbook the author and publishers have entirely re-

written and reset the work. They present a handsome, convenient size volume, well and profusely illustrated. Though the text is admirably suited for the laboratory worker, it should be even more consulted by the student and general practitioner. Even if one depends entirely upon others to do his laboratory work, this volume will be of the utmost value to him as a work of reference and interpretation.

The Medical Clinics of Chicago—January 1916, Volume 1, Number 4. Published Bi-monthly by W. B. Saunders Company, Philadelphia. Price per year \$8.00. The contents are as follows:

Clinic of Dr. Frederick Tice, Cook County Hospital—Epidemic Cerebrospinal Meningitis. A Case of Bilateral Tuberculosis Associated with Pick's Cirrhosis. Paracentesis Abdominalis and Interpretation of Ascites. Acute Endocarditis with a Complicating Meningitis.

Clinic of Dr. Walter W. Hamburger, Cook County Hospital—Primary Carcinoma of the Liver. (Discussion of the Pathology by Dr. Edwin G. Kirk).

Contribution by Dr. George H. Weaver, Darand Hospital—The Schick Reaction.

Clinic of Dr. Charles Louis Mix, Mercy Hospital—Upper Lobe Pneumonia. Symptoms Due to Adhesions Following An Old Appendicitis. Localizing the Constricting Band. (Operative Notes.)

Clinic of Dr. Ralph C. Hamill, Cook County Hospital—Tie Douloureux: Injection of the Gasserian Ganglion; Technic of Operation.

A condition resembling Landry's Paralysis in a Syphilitic. Peculiar Selection of the Motor Cranial Nerves. Differential Diagnosis. Marked Improvement Under Vigorous Antisyphilitic Treatment.

Clinic of Dr. Charles Spencer Williamson, Cook County Hospital—Three Cases of Malaria.

Hemorrhagic Pleurisy.

Trichinosis.

Clinic of Dr. Robert B. Preble, St. Luke's Hospital (at Bed-side)—Pleurisy with Effusion Producing Great Cardiac Displacement.

Unilateral Edema with Pleural and Abdominal Effusion Due to Papillomatous Ovarian Cyst. Dyspnea Usually Pronounced in Malignant Pleurisy.

Clinic of Dr. Maurice L. Goodkind, Michael Reese Hospital—A Fulminating Cerebrospinal Meningitis Due to Pneumococcus.

Aplastic Pernicious Anemia. Analysis of the Blood-picture. Administration of Arsenic and Defibrinated Human Blood.

Primary Adenocarcinoma of the Mediastinum (Inoperable).

Clinic of Dr. Isaac A. Abt, Michael Reese Hospital (Sarah Morris Memorial Hospital for Children)—Infantile La Grippe.

IN MEMORIAM

Dr. W. H. Yelton, of Butler, Ky., born April 27th, 1843; died January 18th, 1916. Had he lived until April of this year he would have been in the practice of his profession fifty years. No man stood higher as a gentleman of the old school. No one ever saw him with soiled hands or untidy in his dress; his general appearance was that of a gentleman, and his life was just as clean, pure and dignified. He loved and labored for his profession; his constant effort was to exalt the standard. There were men more widely known in the State, but no better man than Dr. Yelton lived in this part of the State, and no one will be more greatly missed.

His extreme modesty, tenderness of heart, and love for children were strong characteristics. His fidelity to his patients was extreme; anxiety often keeping him awake when he was given the best bed in the house, if he would only stay with them until morning; fighting out the problem of the patient's condition as he tossed on his bed; unable to sleep during the long night.

It is fitting that we say of him that with these virtues he brought to the profession also honor and dignity. His love of the truth and hatred of a lie was exemplified in his life.

It was a pleasure for Dr. Yelton to be with physicians; he was a good listener, and thinker; loved the society of his county. None more faithful in attendance as long as he was able to come.

We will miss him and deeply mourn his loss, and still we rejoice to have had him with us, to have known him so well, and felt the supporting influence of his clean life, and enduring affections. Any Community can ill afford to lose such men; they surely feel their poverty after losing such useful characters.

Let the County Society realize that our ranks have been broken into, and that before this occurs again that we should get ready for it by filling up the gap, not only by joining elbows, but by joining hearts, which have been softened and tendered by what has taken place.

Now if any failed to let our departed brother have our encircling arms, and manifestations of our love they have lost their last opportunity.

We offer our sympathy to the family; we would at the same time congratulate them that they had known so well, and been loved by such a good man, and were able to show him while he lived their appreciation.

H. C. CLARK,
P. N. BLACKERBY,
T. C. NICHOLS.

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No. 6

THE PROGRAM.

Dr. Gaither, of Hopkinsville, who is the active member on scientific work, has just finished the preliminary program for the annual meeting of the Association. We are publishing it in this issue, and if any of our members are interested in any particular subject on it, we shall be glad to hear from him. Of course, every member cannot be placed on the program. The committee will endeavor to give everybody an opportunity to be heard who has a real message.

In the making of our program, as in every activity of the Association, we think we are continually demonstrating the Democracy of the Kentucky State Medical Association. The only members who are excluded from participation in the program this year are those who have been on for the past two years, and frequently the committee finds it necessary to ask some of the faithful, who have appeared frequently, to do the necessary labor and come again, because they fail to get all the voluntaries necessary to complete the scientific work of the Association. It is to be remembered that from 400 to 750 members gather together at these annual meetings, and they expect to be really edified by the papers. If one is simply to write a resume of the common knowledge already in the hands of every intelligent physician, he is really contributing but little to the success of the meeting. What we want are critical studies of the literature, or reports of actual clinical experiences that are valuable, or the reports of original work which show something. Any mere compilation of what others have said, without intelligent digestion of their thoughts, is tedious and is apt to be misleading. If you have any message which you think is worth while on any of the subject included in Dr. Gaither's preliminary program, please write either to him or to the Secretary within the next week, as in all probability it will be completed within that time.

It will be interesting to our members to know that the Hopkinsville meeting promises to be the best we have yet held, in many ways. Christian County is one of the best in

the State, and the citizens of Hopkinsville have a thorough-going way of demonstrating their hospitality that promises a wonderful experience to every one who attends. They are particularly anxious that the members bring their wives and sweethearts with them. There are as many good roads in Christian as in any other county in the State, and as many of the members will drive through in their automobiles, especial arrangements will be made for caring for them.

If you have any suggestion to make that you think will help the Hopkinsville Committee or the officers of the Association, in making this meeting more helpful to you and the others who will attend, please do not hesitate to write your thoughts to-day.

ABOUT THE DISCORD STILL EXISTING IN SOME COUNTY SOCIETIES.

For obvious reasons it has always been easy to induce leading men from widely separated sections to attend and keep up the interest in the national, the state, and even in the district medical societies, but the problems to be faced in making the frequent meetings of county organizations, composed of those who have, or at least think they have, competing personal and professional interests, sufficiently interesting and harmonious to secure the requisite attendance, papers and discussions, month after month and year after year, are far different. In reality all of their interests are mutual. In the best and broadest sense what benefits or hurts one benefits or hurts all. To convince them that this is true is the problem now before the profession of Kentucky. It has been done to a degree in a few states, and in some counties in all the states, and after a large experience the writer feels assured that it is possible everywhere. The difficulties are on the surface and will disappear in the face of a full recognition of their nature, and of a kind but frank and honest discussion.

*This editorial was inspired by a number of letters recently received from the secretaries of societies in some of our best counties.

TROUBLES OF LOCAL ORIGIN

Widespread as are these difficulties, formerly extending from ocean to ocean, and baneful as have been their effects on every interest of the profession, when reduced to the last analysis it will be found that all of them, large and small, in city or country, are directly traceable to rivalry and jealousy between local doctors who are in each other's way, or think they are. A clear understanding of the truth of this proposition is essential to the purpose of this editorial. Physicians are the most agreeable men in any community except in their relations with their rivals. They are often like *Damen* and *Pythias* with those from a distant city or community, while barely on speaking terms with equally good physicians of their own town or neighborhood. As these conditions largely create and emphasize the necessity for universal local organization, and at the same time, paradoxical as it may appear, constitute the chief obstacle to its accomplishment, they are entitled to a detailed consideration not usually accorded to them.

RESPONSIBILITY OF MEDICAL COLLEGES

If we will consider the influence these conditions exerted continuously on a young man taking up the study of medicine in former years, from his entrance into school up to his graduation, follow him through his early experience as a practitioner, and then make the application general, we will fairly epitomize evils as widely prevalent as they are deplorable. Matriculating in one of our average low-grade schools like those where most of us were educated, three, four or five in a city where there was only room or need for one, all probably without endowment, and run as private commercial enterprises, with the fierce struggle for patronage and existence inseparable or less constantly throughout his college career, the formative period of his professional life, by an atmosphere of exaggeration, misrepresentation and falsehood, as to other schools and teachers, neither worse nor better than his own. Often without an hour's training in the ethics of his profession, or business methods, or even a suggestion as to the duty or value of society membership, our young graduate left his alma mater probably conscious that he was none too well qualified for the duties of his high calling, but anxious to learn, and especially craving the practical knowledge which he believed would come with experience, and from association with his professional brethren, especially with the older and more experienced of them.

HOW DISSENTIONS GROW.

His location chosen, say in a community where there were two physicians already, he

was fortunate if he was not met at the threshold, the most sensitive and impressionable period of his life, with ill-concealed sneers, or complete ostracism, by those already established in practice, which grew if he succeeded or rapidly disappeared if he proved a failure. With time, and an arm's length acquaintance which could not be avoided entirely, he probably learned that one or both of his professional neighbors had practically dropped their studies at graduation: that they received little or no new literature except the free copy advertising journals; that they had no proper equipment for the emergency surgery they must do, while time was habitually given over to petty bickerings and contentions sufficient to have made both of them scholars of no mean attainments in medicine as well as in general knowledge if it had been utilized in single, or better still, in joint study. Although they constantly needed each other's advice and help as no other two men ever could do, he was likely to find that this spirit of envy and jealousy, pitched on a plane low almost beyond conception, not only deprived them of these, but so divided them and impressed the community as to greatly lessen the respect and confidence due both of these otherwise worthy men, as well as the great profession which they alone represented in that community. He found that they often quarreled about diagnoses in which probably both were wrong; about patients who would not pay either of them, or about violations of the code which neither of them had ever read; that each was afraid to collect his hard-earned fees for fear the other would inherit some of his offended patrons; that ambition for excellence in surgery or other special work was dwarfed by the fact that one would send for consultation, or send his surgery, to a distant town or city rather than ask the assistance of his neighbor, and that even their families were so estranged as to be deprived of the social relations and pleasures of which both were most deserving. In a word, our graduate was likely to find that this canker of envy and jealousy, which, in the absence of effective organization, clings to our otherwise noble profession with such tenacity, and blights and curses and curses and blights all to which it clings, not only barred or made all advancement difficult, but so interfered with all social and other interests and purposes of the profession as to destroy his ideals of life. Gradually the dominant bias of his college life began to assert itself, and, with no society influence to correct the evils, or even to furnish him the opportunity of learning that his competitors were well-meaning men personally, who were stunted and misshapen by the same process to which he was being subjected; our

graduate, whose horizon was probably never large, but certainly susceptible of enlargement, would be in great danger of becoming the victim of his environments, and grow smaller and smaller with the years, until he was likely to become a physician only in name.

POVERTY AND OTHER ILLS CAUSED

It was and is mainly this spirit, and the conditions resulting from it, which caused so much poverty in the profession, interfering with it in every business aspect, just as the loss of public respect and confidence, directly traceable to it, accounts for most of the difficulty in securing needed medical and health legislation, and in enforcing such laws when enacted.

And this is no fancy sketch. Conditions have improved greatly in recent years, but let him who doubts its fidelity to truth try to induce the physicians of the same community, somewhere outside of the organized counties of Kentucky, or the occasional nature's noblemen, as an exception to prove the rule, to speak in real kind and unstinted praise of each other. In fact, it had become so much the custom for physicians to refer to each other in terms of detraction, or by damning with faint praise, that one was disappointed in going to a strange community not to hear it; and always, whether in the country between two physicians, or in the city between two factions, whether done with the clumsiness of the boor or the finish of the scholar, back of it was always to be seen the same hideous monster of personal envy and jealousy which has dominated our profession for ages, as the demons of mythology were once thought to rule the world.

That such glaring and hurtful evils should fasten themselves upon a great, noble and really learned profession like ours, generation after generation, and make its dissensions a by-word and term of reproach in common speech and literature, has been difficult for many to understand. As men and citizens, its individual members bear favorable comparison with any and all other classes. They do more for the poor, more actual Christian charity every day in every year than all the churches, preachers, Christian Endeavors, Epworth Leagues, and similar institutions, combined. They can and do live in peace and amity with everybody in the community except each other. Why is it? Whose is the fault?

REASONS FOR THESE CONDITIONS.

On investigation it will be found that this is a condition common to all unorganized vocations whose members lead segregated lives. It is a recognized fact in history that the inhabitants of islands are suspicious and sensitive. This seems to be equally true of most individuals

who live apart from their fellows from any cause. The rivalry between local bankers is proverbial, and until the day of ministerial associations, with the weekly meetings, and opportunity for acquaintance and agreement as to matters of policy and public concern, and at least decent and respectful tolerance as to essentials, the condition of the ministry, was worse than in our profession. Instances might be multiplied indicating each similar vocation. On the other hand, lawyers have always lived together in peace. This is not because they are better men, or that their profession is a broader one, but for the reason that in the ordinary pursuit of their calling they are brought into constant contact with each other, come to know each other, and, being worthy men in the main, mutual respect and tolerance for each other's faults and shortcomings grew up naturally and unconsciously. In addition, with them every term of court is a free post-graduate school, with a constant and almost ideal attrition of mind against mind. Those who do not study go to the rear and lose out. Those who do not polish off their angles get them knocked off. After the hard words and fierce conflicts in the courts, sometimes unavoidable when earnest men contend over serious and weighty matters, which physicians would treasure up and pout about for years, being encouraged to do so by other kindred spirits and custom, lawyers or their professional friends usually effect an immediate reconciliation, go arm-in-arm to the nearest cafe to bury the chance enmity in a lunch, mint julep or cocktail, and are only the better friends for having tried each other's metal.

THE REMEDY.

Through the universal county society system as it now exists in about one-third of the counties in Kentucky, and to greater or less extent in one-third more, it is proposed that there shall be built up in all the other counties and in each community, gradually, and with the self-sacrificing labor incident to all important undertakings, a permanent organization, which will give artificially, as it were, the same opportunity for acquaintance, comradeship and improvement, which come naturally in those more favored vocations, of which the legal profession is a conspicuous example. To do this in all the counties will require a union of all the forces at the command of the profession. To secure it, physicians must be convinced and students taught that no doctor was ever permanently benefited by traducing his competitors, or by the practice of any of the "black arts," and that the time has come for them to decide whether they will go on in the old, discredited course, "learning nothing and forgetting nothing," as Macaulay said of

the Stuarts, wasting valuable time, and bringing continued reproach on themselves and their guild, in endless, senseless, profitless bickerings, as in the past, or, instructed by what is going on around them in other calling, in organized counties in their own calling, get together for their own and the public good. Of course there will be dissenters and pessimists, and the work will be difficult in many places, but each county which has accomplished it, and conducts its society in the broad, kind and mutually helpful spirit to be inculcated, will be an object lesson for its neighbors, good examples being just as infectious as bad ones; and then, and not until then, it will be an honor to be a physician, a pleasure to practice medicine, and, what is equally important, the public will be benefited even more than the profession.

J. N. McCORMACK.

THE ANNUAL A. M. A. MEETING.

The announced program for the next session of the American Medical Association, to convene at Detroit, June 12 and continue for five days, is so full of good things in the way of social entertainments, and especially of scientific instruction and interest, as to make it important that every Kentucky physician in active practice earnestly consider his chances for taking advantage of the opportunity for attendance upon what has grown to be the greatest and most compactly organized medical body in the world, and, at the same time, have an outing in one of the most beautiful cities in the lake region, at the most liberal rates which can be offered. As is true even in a larger and broader sense than of the sessions of our State Association, no medical man can attend and participate in such a meeting as this will be without learning many things which will enable him to return home better qualified to practice his profession, and having suggested to him practical courses of study which, for years to come, will prove of inestimable value to him and those who entrust their health and lives in his hands.

From the opening meeting and address of Dr. Albert Vander Veer, of New York, who as first vice-president, will fill the vacancy in the presidential office caused by the death of our beloved Rodman, until the hour of final adjournment, some of the great scientific sections will be so constantly in session that there need never be a flag in the opportunity of choosing something excellent from one of the many instructive programs. In fact, it will be found that so many good things are always going on at the same time, as to make such an embarrassment of riches, so to speak, that often there will be difficulty in deciding what section to attend, and sometimes regrets after-

wards that he had not been born twins or triplets so that he could take them all in. Not the least of the pleasures of these sections is that one will see and hear authors, scientists and operators, with whose names and work he has been familiar for years, and in the light of the carefully prepared papers, and more especially in the powerful and searching discussions, "when Greek meets Greek" and men, method, facts, and alleged facts, are handled, courteously, of course, but without gloves, he will be able to make a fairer estimate of those who have long been the objects of his hero-worship.

The program indicates that special efforts have been made this year to have the Scientific Exhibit excel any of the preceding ones, some of which have been so valuable as to have been well worth the time and expense involved in attending the session. Second to these in interest and practical importance will be the carefully arranged and classified commercial exhibits, including the latest and best in diagnostic and surgical instruments, devices and charts illustrating methods and advances in preventive medicine; and the display of new books, journals and similar matters relating to modern medicine and the associated sciences.

Excellent rates have been secured for both travel and hotels, the round trip from Louisville being fixed at \$14.65, and that from Cincinnati being \$10.50. Rooms at good hotels range from \$1.00 up to anything one wants to pay, and short and long lake excursions are being planned from which choice may be taken to suit one's time and purse.

Go, doctor; meet your old friends and make new ones, take in all these scientific and social benefits, linger as long as you can in beautiful Detroit, and in the greatest inland sea region in the world, and come back to your patrons and family rested, broadened, a better doctor and an easier man for your wife to live with, or, better still, take her with you, and make it more pleasant, also, for you to live with her.

MEDICAL AUTHORITIES AND VIBURNUM PRUNIFOLIUM.

Do not accept statements in medical text books without discriminating thought. No medical book is an authority. In many of our books, and in articles in the medical journals, facts are stated, and when they are definite facts, of course, these are conclusive, but the mere *ipse dixit* of a man who is writing an article in the JOURNAL, or writing a volume, or even a system of volumes on medical practice, is of little or no value unless it is a statement of fact. The story and history of the use of black haw in medicine well illustrates this idea. It seems that the slaves in the

South were reported to be taking some preparation made from cotton root to produce abortions. An antedote for this was needed, and a country doctor by the name of Phares, in Mississippi, claimed to have discovered such an antedote in an infusion of black haw. Although the articles were published in the journals, no attention was paid to them for several years, until Jenks happened to read them and immediately quoted it not only with approval, but with exaggerated approval. Its use spread throughout the medical world, and each writer of a text book, especially one of the compiled variety, included in it under the heading of *viburnum prunifolium* all the statements that had been made by either Phares or Jenks, and almost every one added some additional class of diseases for which some preparation of this bark was "said to be indicated."

These claims, when read critically, reduce themselves to absurdity. For example, almost every article claimed it was both a sedative and a tonic, which is manifestly impossible. Even in the same paragraph it would claim it would have enough tonic effect on the uterus to stop many flooding spells; at the same time it being asserted that it was so valuable that it might be given throughout a large part of the term of pregnancy in those who aborted habitually.

For many years it has been known to scientists that it has none of these effects. It is the basis for the false and fraudulent claims of almost every female disease remedy which is now advertised either to the public or to the profession. It has been conclusively proven that it is a useless and worthless remedy, and it should be discarded from the armamentarium of the practicing physician.

DR. N. R. SIMMONS.

It is with a profound feeling of sadness that we note the death of Dr. N. R. Simmons, for many years the City Health Officer of Lexington. Dr. Simmons was a man of remarkable personal character, had a striking face and figure; and under his administration, Lexington assumed a rank place among the cities of the United States in its health work. To a remarkable degree, Dr. Simmons had been able to secure the cooperation of every element in Lexington working for the better health of its citizens. The health code of Lexington is a model which may well be copied by every other city of equal size. Dr. Simmons was particularly active at the last meeting of the School for County and City Health Officers, and his loss to the medical profession and the people of Kentucky will be long felt.

SCIENTIFIC EDITORIALS.

RAYNAUD'S DISEASE AND SYPHILIS.

Several years ago one of the authors of this article exhibited a case of Raynaud's disease before the Jefferson County Medical Society. During the discussion of the case one of the members asked the very pertinent question as to whether there was any connection between Raynaud's disease and syphilis. Owing to the limited time for discussion and the fact that the exhibitor did not have memoranda of the literature on the subject with him he did not give a direct answer to the question. It is an important point and has received considerable study both from the theoretical and clinical standpoint during the past few years.

In his dissertation on "local asphyxia and symmetrical gangrene of the extremities" in 1862 Raynaud considered the cause of this disease to be a depraved innervation of the capillaries, causing arteriole spasm. He described the three stages of the disease as follows: (1) local syncope, during which certain of the extremities, most commonly the fingers, though often the toes and sometimes the ears or other parts of the body, become white or yellowish, due to a local contraction of the arterioles and capillaries; (2) local asphyxia, dilation and paralysis of the previously contracted vessels with a resultant redness, blueness or even blackness of the parts affected; (3) the final stage of gangrene of the skin and underlying tissue, usually first manifested by the appearance of phlyctenula, bullae, or open ulcers, and going on to gangrene and sloughing of the affected tissue, with a sharp line of demarcation between it and the unaffected tissue. All three stages may be present at the same time; that is, one area may be in the first stage, another in the second and another in the third. The pulse in the parts affected during the first two stages is small, even filiform, yet can be detected right up to the line of demarcation; in the gangrenous area there is no perceptible pulse, the circulation being entirely absent.

The pathology of this disease seems insufficient to account for the amount of necrosis that occurs in the last stage. During the first stage there is contraction of vessels; Monro claims to have detected degenerative changes in the nerves of the affected fingers, but other workers were unable to observe this except at a late stage when the nerves would be affected anyway by the poor circulation in the part; deposition of hemosiderin and hematoidin in the corium is frequent, but is also present in many vasomotor disturbances. In the second stage there is a dilatation of the vessels, capil-

laries widely distended with blood and blood-cells of both kinds pouring out into the tissues, causing the dark discoloration, swelling, pain, and stiffness. Weiss claims that the dilatation of the arterioles and capillaries which cause the phenomena of the second stage is due to a contraction of the venioles, but here again no cause of such a contraction is known.

Etiological factors that have been associated with Raynaud's disease are cold, disturbance of nutrition, severe systemic diseases, fevers, various forms of nephritis, neuroses, even malaria. The statistics show that it is much more common in women and occurs usually between the ages of 3 to 10 and 18 to 20, especially during the latter period. There has been observed in patients with Raynaud's disease such conditions as hemoglobinuria, which seems quite common, and albuminuria; less frequently, oedema and scleroderma. Cerebral symptoms have been reported, torpor, partial loss of consciousness, epilepsy, mania, delusions and temporary hemiplegias. Other concomitant symptoms are dimness of vision, arthritis, erythema, urticaria, nausea and vomiting, diarrhea, general formication and tingling, and a few others. These symptoms which seem so unrelated to each other that one at once concludes that instead of one distinct type there are many forms of local vascular disturbances ending in gangrene which have been grouped together under the name of Raynaud's disease without having any connection with each other from the etiological standpoint.

Various views have been advanced as to the cause of Raynaud's disease. The main theories are as follows: (1) it is due to endarteritis obliterans; (2) it is caused by a peripheral neuritis; (3) it is the result of vascular spasm. The majority of the writers, including Raynaud himself, were of the opinion that it was due to spasm of the arterioles. A few believe that it is of central origin. Many believe that a group of different conditions with different causes are being dealt with, and consider tuberculosis, syphilis and paludism as the main causes. Syphilis, especially, has been under considerable suspicion; in acquired or hereditary form it has often been observed in persons suffering with Raynaud's disease. Two cases were described by Raynaud in his original paper; others by various observers since them. In the majority of these cases the syphilis was of rather long standing or inherited, but a few are reported, by Lenegre in 1911, and Goucher, Claude and Cuisant, in 1912, in which the leutic infection was quite recent, even cases of a few weeks duration. Another factor that tends to support the theory of the leutic origin of this dis-

ease is the success that has been observed from anti-leutic treatment in cases of Raynaud's disease. Such reports are made by Balzar and Fouquet in 1903, by Berthelemy in 1904, by Lustgarten in 1906, Howard Fox in 1908, by Herman Klotz in 1889, and by one of the authors of this editorial in 1905. A case of Raynaud's disease in a 2-year-old child with hereditary syphilis was reported by Krisowski in 1895 which readily yielded to specific treatment, and similar cases have been reported by Schiff in 1908 and Brocq in 1911. Cases have been frequently observed which give a positive Wassermann, often cases in which there was no other sign of leutic infection. Striking, too, is the number of cases in which conditions have been observed which are suspicious of syphilis, such as angina pectoris, tabes, nephritis, arteritis and periostitis.

In view of the evidence thus relating Raynaud's disease to syphilis, it is impossible to rule out syphilis as the cause of many cases reported as Raynaud's disease. Probably many of these cases were in reality syphilitic endarteritis, localized rather closely to a few areas and exhibiting the secondary symptoms due to the insufficient circulation in those parts. Whether there is any syphilitic basis to true cases of Raynaud's disease is doubtful: certainly all cases of Raynaud's disease can hardly be attributed to syphilis. Some cases are probably due to a tubercular infection, leading to arterial narrowing, such as occurs in lupus erythematosus. Some almost certainly are due to the local effect of exposure to intense cold. There still remains a certain number of cases which give no history of exposure to cold and in which both syphilis and tuberculosis can be ruled out, and the cause of these cases is still unknown.

M. L. RAVITCH AND S. A. STEINBERG.

Tuberculosis is a disease which affects the majority of civilized people at some time during their lives. At least 10 per cent of the population die of it. We have a right to say that few serious diseases, not self limited, tend more naturally to ultimate recovery than does tuberculosis. It is this tendency which renders it so much more favorable than malignant diseases, that those afflicted may be comforted with that greatest of all human blessings—hope. In fact, the disease of itself seldom destroys life, except through the effects of mixed infection. —C. H. Mayo, Sixth Inter. Cong. on Tuberculosis, ii. p. 2.

Knowledge Derived from Antiquity.—Every generation enjoys the use of a vast hoard bequeathed to it by antiquity, and transmits that hoard, augmented by fresh acquisitions, to future ages.—Macaulay.

OFFICIAL ANNOUNCEMENTS

KENTUCKY STATE MEDICAL ASSOCIATION
PRELIMINARY PROGRAM,
ANNUAL SESSION, HOPKINS-
VILLE, KENTUCKY.

OBSTETRICAL

1. The Indications for Cesarean and Porro-Cesarean Section.
2. Nitrous Oxide Analgesia in Obstetrics.
3. Present Status of the Abderhalden Test.
4. Forceps Deliveries.
5. The Present Treatment of Puerperal Infection.

EYE, EAR, NOSE AND THROAT.

1. Some Important Diagnostic Points the General Practitioner Should Know About the Eye.
2. Some Important Diagnostic Points the General Practitioner Should Know About the Ear.
3. Some Important Diagnostic Points the General Practitioner Should Know About the Nose.
4. Some Important Diagnostic Points the General Practitioner Should Know About the Throat.
5. Why the General Practitioner Should Not Attempt to Do Surgery of Special Organs.

DERMATOLOGY.

1. Pruritis: Its Causes and Treatment.
2. Is Acne a Bacillary Disease or Due to Systemic Influences?
3. Urticaria: Etiology and Treatment.
4. Electricity in Skin Diseases.
5. Infantile Eczema in Relation to Feeding.

SURGERY.

1. Cholecystectomy: Advantage Over Cholecystotomy and Its Indications.
2. Two-Stage Operation in Prostatectomy: Its Indications and Advantages.
3. Advantages of Percy's Electric Cautery in Cancer.
4. Newer Methods in Surgical Diagnosis.
5. Gun Shot Wounds, from Experience in Present European War.
6. Treatment of Acute Infection of Extremities (Blood-Poisoning).

SYMPOSIUM ON BONE SURGERY.

- a. Fractures in or Near Joints: Diagnosis and Treatment.
- b. Acute Bacterial Synovitis: Pathology and Treatment.
- c. Bony Ankylosis of Joints and Their Treatment.
- d. Albee Method in Treating Pott's Disease.

. PEDIATRICS.

1. Simple Modification of Milk for the Baby.
2. Acute Pyelitis in Children.
3. Empyema in Children.
4. Tuberculous Meningitis.
5. Facial Eczema in Children.
6. Intestinal Pains in Children, as Colic, Strangulated Hernia, Intussusception, etc.
7. Worms.

PROCTOLOGY.

1. Rectal Conditions from the General Practitioner's View-Point.
2. Ano-Rectal Surgery That May Be Done Under Local Anesthesia.
3. Significance of Minor Ano-Rectal Lesions.
4. Management of Advanced Rectal Cancer.
5. Excision and Immediate Closure Operation for Ano-Rectal Fistula.

SOCIAL SERVICE.

1. Balancing of Social with Medical Knowledge.
2. Training Physicians for Social-Health Work.
3. Physicians and Nurses as Social or Welfare Workers.
4. The Underlying Factors in Disease. Social or Medical?

GENERAL MEDICINE

1. Diabetes Mellitus: Cause and Treatment.
2. Practical Significance of Blood Pressure in Medicine.
3. Functional Heart Disease: What Are They and How Treated.
4. Use and Abuse of Tuberculin Therapy.
5. Rational Management of Typhoid Fever.
6. Present Status of Intraspinal Medication for Cerebro-Spinal Syphilis.
7. The So-called Primary Anemias: What Are They, and How Treated.
8. Clinical Significance of Pain in the Head.
9. How Are We To Be Governed in Administering Biologic Remedies.
10. What Can the Internist Do for Infection of the Bile Tract?
11. Treatment of Acute Nephritis.
12. Therapeutic Value of the Internal Secretions.
13. Rheumatism from the Modern View-Point.
14. Expectorants, Mode of Action and Symptomatic Indications.
15. Management of Cerebral Apoplexy.

UROLOGY.

- 1; Non-Tuberculous Infections of the Kidney.
2. Prostatectomy: Technique and After-Treatment.
3. Genital Tuberculosis.
4. Urinary Tuberculosis.
5. Chronic Nephritis.
6. Nephrolithiasis.

SYMPOSIUM ON LIFE INSURANCE RISKS.

- a. Suppurative Ears, Their Relation to Life Insurance Risks.
- b. Tuberculosis, Its Relation to Life Insurance Risks.
- c. Valvular Heart Disease, Its Relation to Life Insurance Risks.
- d. Appendicitis, Its Relation to Life Insurance Risks.

ORIGINAL ARTICLES

A GENERAL PLAN FOR A SCHEDULE OF MEDICAL FEES.

By J. N. McCORMACK, Bowling Green.

I have long held the opinion that it would not be difficult to frame a plan for a schedule of medical fees which could easily be modified, as to the amount of the charges and other details, to meet the conditions and needs of almost any county or locality in any section of the country. As the plan I have in mind would be for the information, guidance and benefit of the public quite as much as the profession, it would involve conferences and a full understanding with the people of the community beforehand, as well as the fullest possible publicity afterward, through the public press, placards in each office, and otherwise, the explanatory footnote appended hereto being made an essential part of every publication of the plan.

One of the main difficulties about this in the past has been the almost universal, but wholly erroneous, opinion and insistence on the part of both the profession and laity that all the physicians of a community have an equal value and should make the same charge for their services. We know full well, and in a way and to an extent that the people can not, that nothing could be further from the truth. Because of the faulty system of medical education, loose medical laws, and lack of local organization and incentive to study, in vogue in this country until recent years, there are regularly licensed physicians in almost every community in Kentucky and in the United States, in cities and towns, quite as abundantly as in the country districts, who are well paid for all they know or can do for their patrons when they receive anything, and

I insist that the time has come for us to deal frankly and openly with each other and with the public about this and all other matters of common interest. It is essential to the success of such a plan, too, that we abandon at once and forever, the antiquated notion of penalties for those who do not live up to the schedule, or blacklists for those who do not pay for services. Such harsh methods are contrary to the spirit and purpose of real medical organization and, in the very nature of things, can only be productive of misunderstandings and odium, as all the history of the past plainly shows.

I have made rate-cutting and cheap doctors a matter of special study in every section of the country for years, and have come to have much sympathy for this class. On getting down to bottom facts, I have always found that they charged less for their services because they honestly knew, better than any one else did or could, that they were worth less than their competitors, and that this was their only chance to obtain or hold practice. There may be exceptions to this, but in all my study of the subject, extending to every state in the Union, I have never found one. They have my sympathy for another reason. As with the division of fees and commissions, contract and lodge practice, the use of proprietaries and nostrums, and similar mistaken practices and policies, all more hurtful to the people than to the profession, the fault is far more with the schools which pretended to educate these men than with them. In fact, without proper instruction about these matters during student life, so as to make it a part of their very being, just as important to the future physician and his patrons as instruction in anatomy or physiology, and sometimes with bad examples from their teachers to start them in the wrong direction, the wonder is that more of them do not do worse. These are just the men who most need the uplifting influences of county societies and post-graduate courses. At any rate they are actual entities with whom we must live, associate or contend, and with tact and judgment many of them can be made competent. To suspend or expel them from the county medical society is far more of a punishment to their innocent patrons than to them, and it destroys our only chance of reclaiming them.

What is first and most needed in dealing with this class, for their own good as well as of the people, is to raise their earning capacity, to make them better practitioners and better men, by means of consistent, persistent postgraduate study, and by the influence and example of the higher grade members, in every county society, and in such intercourse as comes in daily practice, and then, after they

have been made more competent, in leading them to the adoption of systematic business methods, and aiding them in other ways in securing better compensation. If we could substitute common sense plans of cooperation, the idea of a real community of interests, of practical, kindly helpfulness, such as is common between lawyers, for the habit of fault-finding, jealousy and aloofness which is still as easy to find as it is disgraceful between the physicians of many communities, the difficulties of this entire problem would be reduced to a minimum.

The county societies and postgraduate courses furnish the facilities for doing the scientific and social features of this work. For the business side of it, in addition to an agreement upon a schedule of fees, I am advising that the profession in each county or city consider the advisability of arranging for systematic monthly collections, with a carefully selected business representative, and a centrally located "Medical Collector's Office," the collector to be under bond, and on a definite salary, and with authority to appoint as many assistants as may be necessary, for whom he is responsible, very much as sheriffs and city collectors are required by law to do. The collector should be a man of tact and judgment, he should hold the affairs of each physician as strictly private and confidential, and he should be well paid. This plan should not be tried anywhere until good scientific work is well under way and a spirit of harmony secured, until all of the details have been worked out with the kind of business representatives indicated, and until both professional and public sentiment is prepared for it. Even in large cities the plan is worthy of consideration for office buildings, wards or other convenient groups, if it can not be made available for the profession. It will not be easy to do these things in any community, in fact it is never easy to conduct any important reform which is worth doing, but with such preliminary work as has been suggested, and with tact and judgment in the earlier steps, I am convinced that the plan could be made as pleasant and convenient for the people as it would be helpful and profitable to the profession.

In most parts of the northwest and on the Pacific Coast the rate of charges sanctioned by custom is sufficient to sustain a competent and equipped profession, but in many sections of the eastern, middle and southern states, and in Kentucky outside of the large centers of population, and for a large part of the profession in them, all except the surgical and specialists fees, are wholly inadequate, and this is operating to the disadvantage of both the profession and people now

in a way unknown to our forbears. This country in recent years has passed through an era of most remarkable prosperity, but physicians and other professional classes have not shared in it. With the cost of living more than doubled, and still rising, and the cost of equipment for modern practice quadrupled, the income of medical men, except surgeons and specialists, has remained about stationary. Properly interpreted, poverty in the profession and the lack of equipment and the practical incompetency inseparable from it, is just as important to the public as to us, and the subject should be boldly discussed in public meetings, and in the periodical and daily press until this real, positive danger to the people is a matter of common knowledge. Not only the higher standards of competency, but the increased usefulness of the profession in other ways should be made plain. It now probably does more real charity than all the other vocations combined, but the generous support to which it is entitled, and which is demanded by the highest humanitarian interests, would enable it to do a systematic, intelligent, discriminating relief work which is impossible under present conditions. To an extent not dreamed of by the laity, or even by many in the higher ranks of the profession, a large per cent. of the physicians in this country, in cities and towns as well as in the rural districts, on account of poverty and the pressing needs of their own families, are daily forced to take what is almost blood-money from a class of widows, teachers and working-women, in their times of affliction, whose incomes are so scanty when well, that it should and would be an honor and a pleasure to make them the special wards and beneficiaries of a properly supported profession.

The opportunity has come to me to study this whole question as no other man probably has ever been able to do. In giving the results of this broad experience, in my public talks every evening for years in all sections of this country, I found, in the lay discussion which followed, that the people could be made to appreciate our difficulties and their dangers quite as readily, if not more so, than the profession. In truth, unpleasant as is the admission, the trouble is with us and not with the public, as is true in regard to almost every other evil from which we suffer. If the physicians competing for the same practice in every section of Kentucky could really get together in all these matters, and then take the people into their confidence, the balance would be comparatively easy; as there are not enough of them to do the practice if every patient was given the time, and the kind of scientific examination and treatment, to which

they are entitled when they apply to a physician.

For many reasons, any schedule intended for general adoption should cover only the ordinary fees for general practitioners, and non-operative office work. Surgical fees are usually the subject of special arrangement, and, anyway, they vary to such an extent that an attempt to include them would give the public an exaggerated and misleading notion of what is received by the ordinary surgeon, or by them except under extraordinary circumstances, and would do more harm than good. As a rule, too, surgeons and specialists are better paid and are well able to take care of themselves. Besides, my experience has convinced me that it is in the field of general and office practice, with the hard-worked and under paid ordinary practitioners, that the pressing need of reform exists.

For obvious reasons, also, the schedule should be adopted by the profession as a whole, or as individuals, and not by the county society. The provision in the by-laws forbidding such action by the societies was inserted after careful consideration, was certainly wise under the conditions then and still existing, and probably should be permanently retained. The membership in most societies embraces only about from one-half to three-fourths of the physicians of the county. While it is probable that all, including the former sectarians, will finally come in, this will be the work of years, and, although not absolutely essential, it is important that the schedule be agreed to practically by all of the active physicians of the jurisdiction, whether members or not. Besides, this has been one of the most fruitful sources of discord in societies under the old order of things, and was usually provoked by those who took least interest in the scientific proceedings.

With all the foregoing considerations in mind, and after the matter has been agreed upon by the profession, and fully discussed with the people, the schedule and footnote, in their main features, are suggested only as a basis for action. The rate of charges will seem too high for some counties and communities and entirely too low for others. I am only proposing about what, in my judgment, would be fair and equitable at the present cost of living and equipment in Kentucky; but, of course, the exact fee and other details must be arranged for each community in accordance with what is deemed just and proper. The rate should not be too hard and fixed. There are people of moderate circumstances in almost every community, factory operatives and others, who ought to pay something, and yet should not pay full fees, and a wise discretion on this and similar points

must be provided for in any plan which is to be comprehensive and successful.

The order of arrangement and the items of practice included are as seem best suited for most counties and communities, but the purpose is to make it so simple and flexible that it can be altered to suit varying conditions and views. For instance, if it is thought best, fees for fractures and dislocations, or any other surgical or special work, can be easily added. It will be noted that a broad distinction is made between perfunctory examinations, still only too common, and complete office examinations, including a thorough examination of the chest, of the blood, urinalysis and other like work, involving extra equipment, time and skill. My own opinion is that a double charge should be made for night practice for well-to-do people, but I have yielded something to the views of others on this point. Telephone practice is so annoying, exacting and unsatisfactory, that it certainly should be paid for except where regular visits are being made, and in all cases after bed-time. Consultations are purposely made low in order to develop and encourage this variety of practice.

The form of schedule suggested and the footnote, as they would go on the placard, are about as follows:

SCHEDULE OF MEDICAL FEES FOR COUNTY.

1. Day visit in town.....	\$ 2.50
2. Night visit in town	4.00
3. Day visit in the country, first mile, \$2.00; each after mile, one way.....	1.00
4. Night visit in country, first mile, \$3.00; each after mile, one way	1.50
5. Ordinary office examination	1.00
6. Complete examination and advice	5.00
7. Advice or prescription by telephone	1.00
8. Obstetric case, uncomplicated, not over 6 hours.....	15.00
9. Life insurance examinations	5.00
10. Consultation, double ordinary visit.	
11. Surgical and other special fees, as may be arranged.	

EXPLANATORY NOTE.

This schedule of fees is purely advisory. It is arranged and published for the information and guidance equally of the profession and people. It is intended only to suggest the fees for ordinary services by competent physicians, by those fully able to pay their bills. It in no way applies to practice for the deserving poor, of which all agree to do their full part. It may be that physicians who are less competent will feel that they should charge less for

their services. This is recognized as just, and to do so will in no way affect either their society membership or professional standing. It is especially important that these less fortunate members should have the benefit of the post graduate study courses and other scientific work of the county society, which are free to all, for their own good as well as that of their patrons, and regular attendance at these meetings should be made a condition of continued employment by the people. Night fees are made higher for many reasons, but more especially to give time for such study and society work as is essential in keeping a physician competent to practice with safety to the people.

For the convenience and benefit of both the profession and its patrons, systematic monthly collections, in so far as possible, will be arranged for in the future. It is believed that it will be more satisfactory to families to settle their accounts while they are small, while they remember and are grateful for the services, and it will enable physicians to keep equipped for better service, and to do far more charity for the really deserving poor.

SURGERY IN THE MOUNTAINS OF KENTUCKY.*

By M. C. KASH, Salyersville.

For the benefit of my brother city physicians and those situated with better surroundings, I desire to give them a sample case of surgery done by myself and a worthy colleague, Dr. Skaggs, of Magoffin county.

But remember brethren, I am an earnest advocate of antiseptic measures as far as it is possible to carry them out; but in this case, like many of the cases that our country physicians have to deal with, it is impossible.

Having graduated from the University of Iowa in 1891, I located in the mountains of Kentucky to practice my chosen profession, which I have been doing to the best of my ability ever since.

Be it understood that physicians located in this mountain region, miles away from a railroad or hospital, are frequently compelled to work under adverse circumstances or give up the case entirely.

Now this special case which I report, occurred on the 30th day of June, last year. It was on the head of Licking river, about 25 miles or more from my home at Salyersville. Some half-witted fellow had gone some distance to the nearest telephone and called for the doctor, saying "this man had been shot in the wrist and was bleeding to death." This was all I got out of his message. So

not knowing whether he was shot with a pistol, shotgun or canon, I started for the place, thinking, of course, I would only have to ligate an artery and dress up the wound; I only took my pocket case of instruments, which did not contain any saw or large amputating tools.

Dr. Skaggs who lived nearer the place than myself, had arrived there before I did, but had done nothing to the wounded man, only waiting for me to come.

Well to further give you to understand, the shooting affrays that occur in this mountain country are generally of feud origin and there is not much talking about it; this I presume was the reason that I got no more definite information from the party who sent me the message.

Having ridden that twenty-five miles on a good saddle horse, without any dinner, I arrived there about one o'clock. A big stalwart man about thirty-five years old was lying on the porch on some old quilts, with one of his arms shot nearly off with a shotgun just below the elbow. One glance showed us physicians that it was far more serious than the message gave it. Amputation was now necessary and no time to go twenty-five or thirty miles for instruments.

Here is where "necessity is the mother of inventions". I at once asked if there was a hand saw in the neighborhood? One fellow said he had a "buck-saw" that he used to dehorn cattle with, about two miles from there; so we at once sent him after it, and while waiting for the saw to come, we also had them send to another neighbor's house and get some vessels to sterilize our surgical instruments in, what few we had. So when they got back they could only find a wash tub and a dish pan, they being the galvanized kind, not even having the enameled or porcelain variety.

Not wishing to say anything disrespectful of these mountain people, it is a fact nevertheless, that the only thing they care to possess in the way of earthly treasures, is a piece of this mountain land and a few cattle, with just barely enough to eat that they raise during the summer, without ever trying to have a dwelling house, or anything in the poor little "shack" they do have, in the way of comforts.

So now I will proceed to describe the operating room. The house was a small two-room building with one room for a living room and the other answered for kitchen and dining room; this one only having a dirt floor in it. The dining table in it only had two legs, one end of it resting on the end of a salt barrel; this was our operating table. The old stove in one end of that room did not have a single

*Read before the Magoffin County Medical Society.

cap on it and the smoke just went out in the room, as there was no flue for it.

We put this wash tub on the stove and heated the water in it, not even having a tea-kettle. When the water boiled, we put our instruments in the dish pan and poured on the boiling water, with a little carbolic acid, to sterilize them.

Everything being in readiness, we carried the man into this room and laid him upon this "operating table." Dr. Skaggs happened to have one bottle of chloroform and a little absorbent cotton, so he proceeded to give the anesthetic while I cut the old bloody shirt off the man and prepared the field of operation. We did not have any sterile cloths or antiseptic dressings, of any kind; only the absorbent cotton.

Now comes the main issue for which I have written this article:

There were chickens of all ages and varieties, from Rhode Island Reds to Plymouth Rocks, both roosters, hens and young ones, all in that room, together with three or four large fox-hounds. All these domestic creatures being very tame indeed, so much so that we could not keep them out of the room, as there was no door, besides it was a very hot day, being on the 30th day of June.

Having no sterile cloths to lay my instruments on, I had to keep them in that dish-pan of sterile water to keep them aseptic while I worked. So I set the pan in an old chair where I could reach the instruments and told the congregated neighbors, who by that time numbered about twenty or more, to keep the chickens and dogs out of them while I worked. But of course as the operation proceeded they were so interested in that that they did not see what was happening to the instruments, which were off to one side of me and out of my sight part of the time, so when I turned to pick up another scalpel, there was an old rooster and several old hens with some of the smaller fry, sitting on the edge of the dish-pan looking in and picking at the instruments, not knowing what had been put in the old pan, as it was their ordinary receptacle for food. So while I was shoeing the chickens off the pan, when I turned back to work, there was two or three of those large hound-dogs rearing up on the other side of the table looking at and trying to diagnose what was the matter with their master while he was snoring under the anesthetic. Then I lost my temper and talked very straight to those natives, that I had repeatedly told to keep the dogs and chickens out of my instruments till I got through with the operation.

No, they did not seem to get mad, as they hardly ever get mad at a doctor, for they

don't know when he may be called on to cut a bullet out of one of them.

The operation proceeded with the chickens and dogs still picking into the instruments, till I got ready to saw the bone, which was about halfway between the elbow and shoulder; when I took the old buck-saw, dipped it in boiling water, then with some carbolic acid on absorbent cotton, I did what I could to sterilize it and sawed the bone in two, trimmed the flaps and sewed them with silk thread, no cat-gut ligatures being at hand.

After putting on the dressing we put him to bed; he aroused from the anesthetic in a short time and wanted a good square meal, which, of course, we did not let him have. After giving some instructions as to water and food, we left. I have not seen him since, but Dr. Skaggs said that about three weeks after the operation, he met him in the road riding a mule with his "best girl" riding on behind him, and when he asked him how he was getting along he said "right smart."

I am also reliably informed that about a month after the operation he got drunk, fell off his mule and stuck that stump of his arm in the ground. However, I hear from him frequently and he is all right and has his "best girl" with him yet. The fact of the matter is that this "best girl" was the cause of the shooting, which thing occurs quite frequently among these mountain people.

While doing the operation, I remarked to the physician who was giving the anesthetic, that if the surgeons of Louisville who do their work in the spick and span hospitals under all the aseptic precautions, with a corps of trained nurses and they all wrapped up in a sterile gown, with the instruments and the dressings thoroughly sterilized, should step in and see us in this plight, they would say we were "darned fools and the patient would not live a week." But brother physicians, I will say that that I have lived in this county for over twenty years, have done all kinds of surgery from laparotomy to the removal of "ingrown toe-nails." It has been a frequent and common thing to do appendectomies at private houses and the patients recover successfully. Amputations of legs and arms are common things for us surgeons, we do that frequently and do it at their homes with perfect success.

This case I have given you is only one of the many spectacular surgical operations performed by mountain physicians. True, we much prefer if the patient is able to pay the bill, to send him to the city hospitals, but it is frequently poor people who have not the means, so we have to do the work on the spot or let them die. Blood poisoning and infection are very rare indeed. Altogether the

mountain surgeons perform their work under conditions that would appall the city doctors, yet they are very successful and hardly know what it is to lose a case.

THE COURTEOUS PHYSICIAN.*

By W. B. SALEN, Stamping Ground.

I have often thought that sometime, I would write an article on this subject, and perhaps, have as often thought that it would be of no interest or benefit, and it may seem scarcely worthy of the consideration of the members of this society.

Yet, individually, I am constrained to believe that this subject should interest every true physician.

It is not my purpose to fully discuss this subject or to present anything new, because the qualities that go to make up a courteous physician are as old as the profession itself, but I simply wish to keep constantly before our minds the importance of following the Golden Rule, "Do unto others as we would have them do unto us," and if this alone is accomplished, then our efforts have been fruitful of much good.

It will not only elevate us in the estimation of the sensible men of the profession, but we will also be held in higher esteem in the minds of the intelligent part of the laity. What constitutes a courteous physician? Certainly it cannot be the hot-headed, rash, opinionated, and boasting pretender, who is always positively right while all others are positively wrong.

I believe there is no word that so fully expresses it as "gentleman."

There is no man in any community more valuable to the public than a courteous physician; upon the doctor the people must rely to guard their physical welfare, without which wealth would be of little value. When I was but a small boy, there were three things which I regarded as necessary to my life and happiness, these three things were,—first, my mother, second, our pastor, and third, our courteous physician. (known at that time as the family doctor).

Happiness without mother, salvation without our pastor, health without our doctor, were utterly inconceivable to me, but of one thing I was certain, that is, our courteous doctor was as necessary to my existence, as the Sun that shone, the air I breathed, or the food I ate. The practice of medicine is an employment which calls out and develops to the highest degree, the sympathies of the practitioner. To be a constant witness to suffering and grief is the physician's lot, he is not called to

visit the well, but the sick and suffering. Therefore, in the practice of medicine we are soon reconciled to its hardships.

Medicine is an honorable calling; and as every courteous physician resolves in his own mind that it shall be no less so by his acts and deeds, he is incited to do all in his power to maintain its character and usefulness.

Every physician is, of course, considered to be a gentleman, actuated by a lofty professional spirit, striving to do right and avoid wrong.

We have our successes and failures, we are but human, and mistakes are but too common with all of us, and therefore we should not be so ready to take undue advantage of the errors of fellow practitioners.

Courtesy, truth, and justice should mark every step of our career.

I once heard a courteous physician say: "How easy it is to do a fellow physician an irreparable injury": sometimes in consultation this is easily done, and especially so, when by long and serious sickness the confidence and patience of the family have been severely tried, not by saying a word, but by a contemptuous look, you may destroy forever the influence of your fellow doctor in that family.

Let your everyday conduct in this, and all other respects entitle you to the esteem of your medical neighbors; this you can do without betraying the confidence that the family have in you as a consultant.

Do nothing that will not stand the brightest sunlight and the severest scrutiny, nothing that you cannot approve of with your hand on your heart and in the face of the profession; this is more durable, less expensive, and more in harmony with the views of the sensible men of the profession.

If in consultation you find the physician in charge of the case in error, as all are liable to be at times, it is not necessary that you should tell each member of the family, and their neighbors that you have set the doctor right, and if your suggestions are carried out, you are confident the patient will soon recover.

It is the only profession, trade, or occupation the followers of which bind themselves not to seek personal advantage in any invention, or discovery they may make.

Competitive practice does not necessitate jealousy nor enmity. Harmony among physicians is most desirable, not alone for the comfort of those concerned, but as conducive to the honor and usefulness of the medical profession; as good citizens it is the duty of physicians to be ever vigilant for the welfare of the community, therefore it is essential for co-operation in measures pertaining to the public in regard to the devising, and urging the adoption of sanitary measures for the pre-

*Read before the Scott County Medical Society.

vention of epidemics, and contagious diseases.

There should be fewer feuds, and less contention in this grand profession. We should eradicate from our hearts all jealousy and enmity if we wish to achieve great success in our professional career.

If ever you have cause to believe a medical neighbor has mistreated you, there is nothing wrong in your going directly to him, and in a polite manner ask an explanation, and if he is a gentleman and has that courtesy that all physicians should have he will readily make amends for the wrong done you.

Right here I wish to say, don't be over-sensitive, for sometimes we misconstrue the object and intent of our consulting brother. Be careful how you speak of other doctors' cases, or you may unjustly be the cause of a suit against a reputable physician, who has conscientiously discharged his duty in the case of sickness, accident, or surgical operation intrusted to his care.

It has truly been said "The very silliest thing in life sometimes creates the most material strife."

Sometimes it happens that a doctor becomes discourteous to his friends, indeed, he was a wise man who cried, "Save me from my friends." There are many kind of friends from whom a doctor would wish to be saved. For instance: there is the candid friend who chastens us by telling us all the unpleasant things that are said of us behind our backs; the frivolous friend, who looks us up when we are earning our bread by the sweat of our brow, and tells us about the doctor's bill he has paid, and forgets to pay ours; the inquisitive friend, that we all know so well and the hypochondriac friend who bores us about his numerous ailments; but the worst of all, the easy going friend. He is more than an annoyance, he is a serious affliction: in his mildest form he sings the praise of the doctor whom he oppresses with his patronage, which is generally at night, or while at the dinner table. I also wish to warn you against the professional prevaricator. For Homer has well said: "Who dares think one thing, and another tell, my heart detests him as the gates of hell."

For the maintenance of harmonious, and courteous relations, local societies are important; these societies should embrace all the members of the profession of the community, who are in good standing; this affords opportunities for intimate acquaintance, and enjoyments of a social character. Join the medical societies of your county, and state, and get your medical neighbor to do the same; society membership is a guarantee of your good standing: organization gives protection both to the profession, and to the individual, there

you can meet your medical neighbors on common ground, grasp each other by the hand, look into each other's faces, and compare investigations, experience, and opinion by friendly discussion.

In these societies, jealousy and enmity can be softened and professional courtesy formed and cemented; of course, medical societies are not specific for all professional efficiencies.

Be polite, and courteous with every one at all times, especially so when you are vexed or in a hurry: abruptness makes many wounds, some of which are difficult to heal, even under the very best antiseptics.

True courtesy is a seed that costs nothing, can be planted at all times, it always bears good fruit and fruit that never withers.

ANAPHYLAXIS.*

By W. R. THOMPSON, Mt. Sterling.

Anaphylaxis is a word coined by Richet from the Greek and means without protection, as this phenomenon was supposed to be the exact antithesis of immunity, which means with resistance to infection.

Later research shows the two processes to be closely related, therefore the word anaphylaxis appears to be somewhat of a misnomer.

The first observation of anaphylaxis as it occurs in infectious diseases was made by Jenner in 1793, who called attention to the sudden appearance of an "efflorescence of a palish red color about the parts where variolous matter had been injected into a woman who had had cow pox thirty years before.

In 1839 Magendi found that rabbits injected with egg albumen died after a repetition of the injection, and the same phenomenon was observed by Smith sixty-five years later following the injection of horse serum.

In the studies of diphtheria and tetanus antitoxin, apparently paradoxical results were observed during the immunization of animals.

This led to a closer study of the subject by Richet, Arthus, Von Piquet, Smith and others who found that the phenomenon of anaphylaxis was caused by proteins.

The symptoms and lesions are fairly well known though the exact nature and mechanism involved in the process is not established and the subject still remains a fruitful field for further study.

We have learned that the first injection of a protein (serum, milk, egg albumen, etc.) produce no symptoms, but serve to alter the power of reaction on the part of the body cells by rendering them unusually sensitive or susceptible to the same or closely related foreign protein. Rosenau says, anaphylaxis may be

*Read before the Montgomery County Medical Society.

considered "a condition of unusual or exaggerated susceptibility of the organism to foreign protein."

After a definite interval, a second injection of the same or allied protein may produce an itching rash and fever, or violent symptoms of illness and rapid death may even occur.

In man these symptoms are usually an urticarial rash, fever, joint pains, etc., commonly called serum sickness and pass off in a few hours or days. The severer and fatal forms being extremely rare; most cases occurring in those known to be hypersensitive to horse protein, or in the condition known as status lymphaticus.

Different species of animals present widely differing pictures with the same protein, and Shultz has shown that serum anaphylaxis is a matter of hypersensitization of smooth muscle in general and that during the anaphylactic shock all smooth muscle contracts.

So far as known only proteins may become anaphylactogens and almost any protein from whatever source, animal or vegetable, will produce sensitization and intoxication in susceptible animals.

The protein, however, must be foreign to the circulating blood of the injected animal, but may be tissue protein of the same animal.

It is now generally accepted that both the sensitizing and intoxicating agents are one and the same protein. Nor does the protein have to be always given by injection, for the ingestion or inhalation of certain proteins, even in minute quantities, will cause anaphylactic phenomena in susceptible persons.

There is no doubt that a poison is the etiologic factor in producing anaphylactic symptoms, which are always the same in the same animal, no matter what protein is used.

These protein poisons are composed of protein cleavage products, but as yet have not been isolated in a pure state.

Passive anaphylaxis may be produced by injecting a normal animal with the blood or serum of an animal which has been previously sensitized.

Infection, immunity and anaphylaxis are closely related. The so-called period of incubation in acute infectious diseases is but the antibody formation period that precedes the anaphylactic phenomenon as manifested by the appearance of the disease itself.

This antibody formation period varies, of course, in different diseases according to the protein substance which has entered the circulation.

We know this period in a large number of diseases, such as smallpox, measles, etc.

The study of anaphylaxis has shown that idiosyncracies or hypersensitiveness to certain drugs, as quinine, belladonna and others

that we often see, and to certain pollens as in hay and rose fever, are but anaphylactic manifestations. When, where or how the body cells acquire this hypersensitiveness to these drugs or pollens we do not know.

The tuberculin and other vaccine reactions are anaphylactic phenomena and are steps in the production of immunity to disease.

This subject is so large and there is yet so much work to be done before it can take its proper place in medicine, it would be well to confine the rest of this already too long paper to the consideration of serum sickness, which is the anaphylactic manifestation with which we are most familiar.

The various clinical manifestations of this disease, are due to the horse serum itself and not to the antitoxin it contains, for it has followed the injection of sterile normal horse serum.

The serum from certain horses appears to be more likely to cause these symptoms than that from others.

In this way we account for the larger number of cases following the administration of certain lots of serum.

The frequency of serum sickness is, as a rule, in direct proportion to the amount of serum given and in inverse ratio to the severity of the disease for which given; for we find it more often following mild or moderately severe cases which have had a liberal amount.

Serum sickness, however mild or severe, is a true anaphylactic phenomenon. Those rare cases resulting in death following serum injections are but severe manifestations of the same disease.

Fortunately this undue hypersensitiveness is foreshadowed by the asthenic or hay-fever-like attacks which susceptible persons exhibit when around horses or stables. It goes without saying, horse serum should never be given to such persons.

While serum sickness is usually due to horse serum, the serum of other animals, as the ox, rabbit, sheep and others will produce it.

When a foreign serum is introduced into the circulation it calls forth the production of antibodies and when the production of these anti-bodies has reached a certain point they react upon any remaining serum, causing cleavage and the liberating of a protein poison which is responsible for lesions and symptoms.

The period of antibody production is usually eight to twelve days. If the dose of serum be small, antibody formation goes on just the same, but the serum does not persist in the circulation; hence symptoms do not develop in such a person, though if reinjected subsequently they will appear. This is why a con-

centrated serum is not likely to produce serum sickness, as if a smaller quantity is injected.

As long as antibodies remain in the blood, anaphylactic symptoms will develop if another injection is given.

This period is often several months or a year and in some instances always. In others the body cells are so "keyed up" by reason of a former injection they produce antibodies very rapidly, and symptoms may develop in twenty-four hours, or we may have an explosion as in those normally susceptible to horse serum.

Anaphylaxis is specific, that is a person receiving ox serum will not be affected by a later injection of horse serum, and it has been suggested that immunizing anti-bodies be made from cattle, reserving that made from the horse for treatment should the disease be contracted later.

The symptoms have already been referred to. About forty per cent. of all cases injected develop some form of the disease and there have been about thirty cases of the explosive, fatal form reported; a small number indeed compared to the thousands receiving horse serum every year.

It would be well to look somewhat into the prevention of serum sickness, for it is almost certain to occur if serum is given within a year or so following a previous injection.

Vaccination with a drop of anti-toxin, as in vaccination for smallpox, will usually determine as to whether the individual is susceptible or not, as a reaction around the scarification will usually appear within fifteen minutes or less, with little or no general symptoms.

If no reaction appears locally in half an hour the injection of a full dose may be given and is not likely to be followed by serious trouble.

If the dose is given intramuscularly the absorption will be slower and severe symptoms not likely to occur.

The administration of a dose of atropine previous to the serum and repeated at intervals of twelve hours for two or three doses is theoretically good practice, for suspected individuals.

A preliminary injection of 0.5 c.c. of serum as antitoxin may be given in suspects and if no symptoms develop in three or four hours the regular dose may be injected; this method is in common use.

In the majority of cases no treatment is necessary, soothing lotions, a brisk cathartic and sedatives are indicated and sometimes an opiate.

Calcium chloride or lactate have been recommended in doses from five to ten grains as

a prophylactic and cure but are of doubtful utility.

Authorities consulted: Kolmer, Holt, Osler, etc.

SOME OBSERVATIONS WITH LOCAL ANESTHESIA.*

By C. C. HOWARD, Glasgow.

The subject of local anesthesia has always been of special interest to me, from many different standpoints.

My first experience in this line was with cocaine, 1-2 per cent. solution, only in minor work. One case I remember very distinctly, a middle aged man had a small tumor on the leg, which I assured him could be removed easily without pain. I began—had not injected more than 5 m. of the 1-2 per cent. solution of cocaine than he informed me he was turning blind. His pulse became very fast and irregular: I immediately corded the limb and removed the tumor; he felt very peculiar for several hours: this was lesson No. 1 in red letters.

My next experience was with novocaine 1-2 per cent. solution with 3 m. of adrenalin to each ounce.

Case No. 1. Young lady, age 24, past history negative; exophthalmic goiter with all the cardinal symptoms; pulse rate at time of operation, 112.

Infiltrated across the thyroid and around it using about two ounces, began the incision within five minutes after injecting. Anesthesia was perfect down to the superior poles then injected them, pulled the muscles back and ligated both superior thyroid arteries: the only pain this patient complained of was when we pulled on the tissues and from the pressure when first infiltrated. No shock, whatever. Results good.

Case No. 2. Female negro, age 32; large cystic goiter. In this case used 5 ounces of the solution; removed a cystic goiter intact, weight a fraction under a pound. No pain to speak of, pulse never varied, no post operative shock.

Case No. 3. Female, age 73. Past history negative. Large ovarian cyst, which had made her an invalid. This old lady said she would have to be put to sleep, couldn't think of going through with it while awake. I assured her we would have a doctor to give her something that would help her. The anesthetist got ready to give an anesthetic, but he only used perfume. So, while he was giving his favorite brand, we quietly injected the abdominal wall and opened the cavity, inserted a trocar into the cyst and drained off

*Read before the Barren County Medical Society.

the fluid. Poured 10 c.e. of a one per cent. urea and quinine solution into the abdominal cavity, lifted the sack out of the abdomen and at one place it was adhered to the omentum: this was clamped, tied and cut, pedicle injected, tied and cut. Abdominal wall closed. The tumor and contents weighed 40 pounds. No shock, whatever. Ate a light dinner and was sitting up in the chair the seventh day. Didn't complain of any pain while operating.

Case No. 4. Two orchidectomies. One with large abscess: the other in the first stage of tuberculosis.

The abscess case (I assisted Dr. Miller) in a very nervous man. Blood pressure 180 to 190. Even with the abscess the pain was not extremely severe at any time. The other case a young man who felt sure he would have to have ether. I told him all right, we would give him some. Told him we would inject the tissues some and perhaps he would not have to take so much ether. Dr. Porter began with the ether, never giving him over two drops per minute, just enough to smell it well. We removed the testicle within 20 minutes. He says he never suffered a pain. Ate his dinner as usual sitting up the 4th day.

Hernia. Male, age 52. Large serotal hernia. Had been wearing a truss for some time. Used urea and quinine, 1 per cent. solution and some 1-10 per cent. solution of cocaine, (could not get the novocaine on account of the war). He did not complain of any pain while operating, only at the ring which infiltrated again. After pain negligible and healed by first intention, a great deal of induration which gradually disappeared without any ill-effects, due to the urea and quinine.

Shoulder. Male, age 25. Epileptic three years ago. Had a fit, his shoulder was dislocated, reduced by two doctors in a very short time; he dislocated it again, this gradually grew worse, dislocating and then reducing it as many as five times per day. Urea and quinine, 1 per cent., was used, 60 c.e. in all. Anesthesia perfect. Incision down to head of humerus, no rent was found in the capsule, so we decided to nail the head into the glenoid cavity. One six-penny wire nail was driven through the head of the humerus into the glenoid cavity, another nail through the coracoid process into the head of the humerus. These wounds healed in a very short time, scarcely any after-pains.

Rectal Cases. Have been using urea and quinine, 1 per cent solution, after all rectal operations, infiltrating all around the rectum and up in the perineum, using in all 40 c.e. to 60 c.e.. Don't leave any foreign body in the rectum. This line of treatment has given our patients the most gratifying results. No after

pains; gas passes without any trouble. Can dress the wound on the third and fourth day without pain. This anesthesia lasts from 10 to 14 days and does not prevent healing in this region.

CONCLUSIONS.

First. As to choice of anesthetic from my limited experience, I would much prefer novocaine. It is only 1-6 as toxic as cocaine. Can use it *ad libitum*; have never heard of any toxic symptoms. Urea and quinine cause a great deal of induration and may retard healing if in a strong solution. I would prefer it in rectal work. I trust some American chemist will make a drug which will take the place of novocaine, as it is a German product and our supply is limited.

Second. Local anesthesia offers a great deal to your patient, relieves the anxiety and the real danger of general anesthesia, does away with the post-operative nausea, gas pains, etc.

Many a patient can be operated under local anesthesia that could not take a general.

Third. Some patients are entirely too nervous for local anesthesia: a great many of these you can manage by giving them a small hypodermic, then have the anesthetist to give them a few drops of ether occasionally. This will help to allay the nervous symptoms greatly: tell them you will inject some fluid so they won't have to take so much ether. Don't have any talking, quietly operate, be careful about pulling on the tissues—here is where you get pain.

Fourth. I want to thank all the doctors who assisted in these few operations, for the success was greatly due to their advice and counsel.

This crusade against tuberculosis is the greatest work which man has so far attempted.....I certainly believe that the time will come when tuberculosis will no longer curse the race. The eradication of this disease is by no means solely the medical man's problem; it demands the combined intelligence and labor of all men who are interested in the welfare of the race, and the individual who regards it with indifference should find no place in our legislative halls, either national or state.

To take the life of a fellow man willfully or maliciously is murder—the greatest of all crimes; to do so through ignorance or carelessness is manslaughter. In effect it is the same as murder, although in guilt it may be less heinous.

The great majority of deaths from tuberculosis are due to manslaughter.—Victor C. Vaughan, Sixth Inter. Cong. on Tuberculosis, iv. Part 1, p. 191.

SYMPOSIUM ON INFLUENZA

INFLUENZA; ETIOLOGY AND PATHOLOGY.*

By ROBERT T. HOCKER, Arlington.

Before considering its etiology we think a brief historical sketch is not inappropriate.

Influenza has no favorites, shows not the slightest semblance of partiality. Wherever the *genus homo* has gone, this disease has followed in his wake. This feature is somewhat compensatory, all fare alike, there being no immunity, all over the habitable globe its victims are found. Epidemics usually develop in the East and travel west at the rate of about eighteen miles a day. We think the velocity far exceeds those figures in some epidemics. In 1647 the first epidemic occurred in America. Subsequently visitations took place in 1782, 1803, 1804, 1821, 1834 and 1843. The illustrious Daniel Drake of Cincinnati, Ohio, wrote an exhaustive account of it in 1809.

In 1843, after the fearful outbreak of la grippe in New York City the weekly death rate was doubled. The mortality has been steadily lessened for the last ten years, and is now greatly reduced. The greatest epidemic perhaps, in the history of the malady reached America about the middle of December 1889. Like a dynamite explosion in rapidity and thoroughness of action. Within thirty days it had invaded nearly every home and its victims were numbered by many thousands and even into millions. Another epidemic prevailed during April and May, 1891. There was comparatively but a small number of cases, again in the winter of 1892-93 for a brief period and the cases were of a milder type.

During the ensuing winter there were only a few sporadic cases. It prevailed as an epidemic for the following seven years in small sections of the United States. In January and February, 1901-02 we suffered another scourge from this dreaded affliction. There was a considerable number of cases of above the average severity. Epidemics have occurred, perhaps, every two or three years until December, 1915, when another outbreak occurred of unusual severity, and in the number of victims perhaps equal, if not greater than that of 1890.

Influenza is an acute, contagious disease, caused certainly in the large majority of cases by the Pfeiffer bacillus. Pfeiffer discovered this bacillus early in 1892. The Pfeiffer bacillus is believed by most authorities to be the

sole cause of the disease. This, however, has not, we think, been positively proven. Some very recent writers believe that the streptococcus sustains a causative relation to the malady.

Some writers, notably Leichtenstern takes the position that in true epidemic influenza the Pfeiffer bacillus is the sole pathogenic agent, while la grippe, which he styles pseudo influenza, is a disease of unknown origin. The specific germ enters the body, we believe, through the medium of the inspired air. Some contend that the infection is through the alimentary canal, while still other writers believe that frequently it is transmitted through the conjunctiva. Age has but little influence, however, it occurs oftenest between the ages of twenty and thirty. The very young are not near so susceptible as older people, while the aged are frequently its victims. Unfortunately, one attack does not impart immunity.

There are no anatomical lesions that specially characterize the disease. In abdominal cases there is sometimes enlargement of Peyer's glands and the solitary follicles. There is intense hyperemia of the nasal, pharyngeal, laryngeal, tracheal and bronchial mucous membranes. The congestion is usually confined to the larger tubes, in rare cases it invades the smaller bronchi and results in atelectasis. We feel quite sure that there are changes in the blood and nervous system. In no other way can we account for the evidences of blood poisoning and the awful general depression.

Fatalities are very rare in uncomplicated cases, but when they develop the physician is aware that he has to meet a condition of extreme gravity.

SYMPTOMS AND DIAGNOSIS OF INFLUENZA.*

By J. F. DUNN, Arlington.

La grippe usually makes its appearance suddenly, the prodromal period lasting from two to three days, consisting of loss of appetite, sluggishness, slight headache, etc. But as a rule, there is no prodroma, the onset being sudden. Patient has a decided chill or chilly sensations accompanied by rise of temperature, headache, soreness of eyeballs, general myalgia, and great prostration. The myalgic pains which are severe at first gradually subside in the course of twenty-four to thirty-six hours, giving way to general soreness. The patients often express it by saying they feel as if they had been beaten with a stick.

*Read before the Carlisle County Medical Society.

*Read before the Carlisle County Medical Society.

The temperature reaches its maximum in the first twenty-four hours, sometimes going as high as 104 to 105 degrees, then gradually subsides, reaching normal in two or three days. In rare cases the fever terminates by crisis.

The patient is nervous, restless and troubled with insomnia. The sleeplessness is due at first to the severity of the pains, later to nervousness.

Catarrhal conditions of the respiratory tract exist, consisting of suffusion of the conjunctiva, profuse lachrymation, sneezing and pharyngitis. There is hoarseness, and coughing. The cough is dry and harsh, with little expectoration. Often there is nausea and vomiting. Children often have diarrhea, with abdominal distention.

To sum up, the leading symptoms are: First, Severe aching all over the body (later giving way to muscular soreness); 2. Prostration; 3. Fever, (which may be absent); 4. Catarrh of respiratory tract; 5. Insomnia, all of which taken together will rarely cause any one to be mistaken.

DIAGNOSIS.

Lagrippe, like malaria, affords a lovely screen for us to hide behind occasionally to cover up our ignorance. Its a mighty nice thing when forced to express a diagnosis on the first visit, and later on, be able to tell the family that it has "run into" measles or pneumonia.

The diagnosis, as a rule, is very easy. Often the family has the diagnosis already made when the doctor arrives.

We have to differentiate from the following:

1. Pneumonia, in which the consolidation is much more marked, the pulse and respiration are much faster and in lagrippe the nervous depression and muscular pains are more marked.

2. Cerebrospinal meningitis. In this case, all things must be considered, that is, the presence of an epidemic of either disease, the stiffness of the muscles and the retraction of the head, and lastly, if still in doubt, a lumbar puncture should be made and a microscopical examination made of the spinal fluid.

3. Measles and smallpox. In the absence of an epidemic it is sometimes difficult to establish a positive diagnosis, or to differentiate lagrippe from measles and smallpox, but the rash soon makes its appearance, thereby clearing up the mystery.

COMPLICATIONS AND SEQUELLA OF INFLUENZA.*

By T. J. MARSHALL, Bardwell.

Influenza, lagrippe, or grip, happens no doubt to be fresh in our minds at present, as the country has just passed through the greatest pandemic probably that was ever known and we in Carlisle county had our part.

The portion of the subject that has been assigned to me presents doubtless the most important pathological conditions during the treatment and care of a case of grip. The complications and sequellae of influenza are numerous and are the result by far of the greatest number of deaths from this infection, which most certainly prepares and fertilizes the soil, as it were, for these more serious and dreaded conditions which may complicate or follow.

There is probably no disease in which complications are so apt to develop, or which is followed so often by grave conditions as in influenza. Grip to my mind is a sneak, a treacherous and unprincipled trouble, it so undermines the constitution and leaves an organ so crippled that serious complications and sequellae readily take hold and often result in death to the patient. Influenza *per se* is not a serious disease, except in very old and debilitated subjects, but a complication or sequellae makes an extremely serious condition at any age of a patient. As I said it is not a simple case of grip that we dread, but it is the complications and sequellae.

The definition of grip given by most authorities leads us at once to suspect the first and most common complication, the one responsible for more deaths than any other disease with which we have to deal, namely the pneumonias. An influenza infection so weakens a patient's physical and resisting powers, that it is almost natural that other and more serious pathological conditions are prone to come up during an attack of grip, or that the system is left in such a weakened and debilitated state that a serious pathological condition may follow and end a patient's existence.

Anders and Boston give the following definition of influenza, which, to my mind, about covers the subject, that is, "An endemic and epidemic acute infectious and transmissible disease, said to be excited by the bacillus influenza, and characterized by a catarrhal inflammation of the respiratory and alimentary tracts. There is a special tendency toward the development of the pathological changes known as bronchitis, bronchopneumonia and myocarditis." From the foregoing definition

*Read before the Carlisle County Medical Society.

we at once recognize that the respiratory tract is the most apt to receive the brunt of the infection, and therefore the most likely to give us trouble.

A patient with an uncomplicated case of grip will usually have a harrassing cough without any pathological changes found on physical examination of the chest. If we do find even a bronchitis we have a complication to deal with. This complication is common in the very young and aged, and may prove fatal, while in the more vigorous it is not to be dreaded so much for itself, but as a condition that might delay convalescence, or prepare the soil for certain sequella that I will call your attention to later. Bronchitis is the most frequent complication of influenza, next to bronchopneumonia; this like bronchitis in the young and old is almost always fatal and may prove so at any age. This is probably the most frequent cause of death during an attack of grip. As you are aware it is very easy for a simple case of bronchitis to merge into a bronchopneumonia, and it is sometimes a most difficult proposition to distinguish which we are dealing with, bronchitis or bronchopneumonia.

Lobar pneumonia is by no means a rare complication, most frequently however, it comes on about the time the grip has spent its force on the human body, or it manifests itself early during convalescence.

Pleurisy is a complication, especially if we have already a pneumonia. Gangrene and abscess of the lungs may arise. Middle ear trouble may complicate an attack of grip; it may manifest itself early in an attack or come up later as a sequellae.

The gastro-intestinal tract comes in frequently for its share of the trouble, and will sometimes give annoying complications. There may be vomiting, griping and purging, sometimes hemorrhages from the stomach and bowels, even catarrhal jaundice appears during an attack of grip.

The nervous system is probably the next most frequent part of the body to suffer from an influenza infection, and may give rise to very troublesome complications. Probably the most frequent symptom observed in an attack of grip comes under this heading, namely a perineuritis, which is the cause of most of the patient's suffering. An active form of delirium may appear, especially if certain other complications have arisen, such as, pneumonia or pericarditis. Purulent pericarditis is by no means a rare complication.

The genito-urinary tract may be another system affected and give rise to troublesome and grave complications, such as renal congestion or acute nephritis.

Among the sequellae, first in importance

again comes the respiratory tract. After an attack of grip and especially if there has been a complication of bronchitis, bronchopneumonia or lobar pneumonia, the field is in a most fertilized state for tuberculosis, and this is probably the most common sequella of influenza; especially if the patient has had a slow convalescence or repeated attacks of grip in a short period, or has had one of the complications just referred to. Abscess and gangrene of the lung may follow a case of grip as sequellae, also tachycardia, and angina pectoris, etc. Chronic gastro-intestinal catarrh may also be mentioned. Among the nervous sequellae will be mentioned insomnia, neuralgia, migraine, melancholia, meningitis, acute ascending myelitis, peripheral neuritis and perineuritis.

The organs of special sense are to receive especial mention as a sequella of grip, such as, otitis media, otitis interna and mastoid abscess. To my mind the sense of hearing is one of the most commonly crippled parts of the human system as the result of an influenza infection. Again conjunctivitis, keratitis, iritis, acute glaucoma, etc., are more or less frequent sequellae.

Latent forms of tuberculosis and nephritis often become active and progressive affections during or following an attack of grip.

TREATMENT OF INFLUENZA.*

By W. Z. JACKSON, Arlington.

The preventive treatment consists in the avoidance of exposure to cold and wet during the epidemics and of association with patients suffering from the disease. Isolation of the patients should be carried out whenever practical and the sputum and nasal discharge should be disinfected and destroyed. When the patient is coughing and sneezing he should hold a cloth over the mouth and nose to prevent the spread of the germs.

When influenza is prevalent it is well to practice spraying of the oral and nasal cavities with some mild antiseptic.

Hygiene. The patient should be placed in bed in a well ventilated room, preferably with an open fire; all persons excluded from the room but the nurse, if possible. Encourage the patient to drink plenty of water and liquids so as to dilute the toxin. They should have plenty of cover on the bed, if chilly, hot applications placed around them. I think it best to place them in bed, thereby shortening the attack and lessening the danger of complications.

Diet. The diet should be nourishing and in a liquid and palatable form. Most of the patients I have had did not care to take nour-

*Read before the Carlisle County Medical Society.

ishment; they had no taste but should be encouraged to take nourishment at regular intervals if their stomach will tolerate it.

The treatment of the coryza symptoms. When the nose and throat and the upper bronchi are in a congested state sneezing and coughing I find tincture of belladonna and a little opiate in some form every three or four hours relieves these symptoms very promptly and a nasal and oral douche of some mild antiseptic thereby lessening the danger of middle ear and sinus infection. When infection of the sinus occurs steam inhalation and the use of adrenalin spray 1-5000 or a one or two percent. solution of cocaine may favor natural drainage by shrinkage of the engorged mucous membrane. Later if the secretion from the bronchus is abundant and difficult to raise ammonia chlorid or aromatic spirits of ammonia, wine of ipecac compound, syrup of squills with camphorated tincture of opium every three or four hours. Four grains of quinine night and morning, Dover's powders may be added to the dose at night with a hot lemonade or ginger stew. For the aching and pains in the joints stramoniat pills 5 grain, or magnesium salicylate 5 grains, every two or three hours and the joints wrapped in hot flannel has given me good results.

If fever is 102 or 103 acetphenetidin 5 gr. every two or three hours or tincture of aconite with bromide of potash, if nervous, and a warm bath. At the same time watching the heart as this is an infectious disease, as we do not know the extent of the infection.

Treatment of the gastro-intestinal manifestations of influenza, whether occurring alone or associated with the respiratory or nervous form must be symptomatic.

If any food is retained, milk, albumen water, or thin gruels may be taken, if nausea persists rectal feeding may be necessary. Hot salt solution enema if the bowel is not too irritable, may be of benefit to cleanse the intestinal canal and keep the kidneys and skin acting. For sick stomach shaved ice, bismuth subnitrate, aromatic spirits of ammonia will usually settle sick stomach. The bowels should be kept open with fractional doses of calomel or mild laxative.

Influenza in children is practically identical with that of the disease in adults; doses should be regulated in accordance with the age of the patient.

Complications should be treated as when occurring independently. During convalescence the patient should avoid too early exposure to out-door air and any possible risk of the infection. Before going out for the first time the temperature should have been normal for from five days to a week. Nour-

ishing diet and tonics such as cod liver oil, iron, strychnine and the vegetable bitters should be prescribed.

BREAST TUMORS.*

By J. B. LUKINS, Louisville.

The frequency of the occurrence of a lump in the breast and the fact that almost 90 per cent. of these are, or will be cancer, makes it incumbent upon us that we study thoroughly the diagnosis and indications for treatment.

The fact that little or practically nothing new can be offered is not sufficient reason for dismissing the subject without proper consideration. When the mortality is still colossal it must be admitted that the problem is still unsolved.

Tumors in the breast are frequent, the exact cause is not known, we do not possess positive means of making a diagnosis prior to operation, surgery is the accepted treatment. The operation has been perfected or it has at least reached its limits, the mortality has only slightly decreased in the last five years, yet it is possible with the knowledge we have to so advise these unfortunate patients that the percentage of cures will be greater and the percentage of recurrences very materially lessened. The observance of only a few cases has been sufficient to impress me that this great responsibility rests with the family physician. To emphasize the points that we do know, with a hope of their practical application is the purpose of this paper. Three etiological factors that demand consideration are age, heredity and trauma.

Tumors of the breast though rare in children occur in both sexes and at all ages. Benign tumors in the young are more common in mammary gland than the malignant, the most common varieties being fibro epithelial growths and angiomas.

Sarcomata are rare and carcinomata almost unknown before puberty. Angiomas are usually congenital or appear in infancy, fibroadenomata develop as puberty is approached. The smaller benign tumors may cause no inconvenience or they may give rise to pain, tenderness and inconvenience on account of their size.

While age is always a factor for consideration and the majority of malignant cases are seen in women over 25 or 30, yet it must be borne in mind that cancer may occur at any age, or a benign tumor if not removed may become malignant.

Reports from the Mayo Clinic show that at all ages 85 per cent. are malignant and that

*Read before the Jefferson County Medical Society.

one-half of the remaining 15 per cent. become so. It is said that over half of the malignant tumors are found between 40 and 55 years of age. It is probable that the retrogressive changes of the menopause afford a startling point for tumor formation.

Dr. Rodman says, that we should get away from the old teaching that cancer is a disease after 40, 20 per cent occur between 30 and 40.

It has long been supposed that heredity plays an important part and a family history of tuberculosis or cancer should always be looked for but the majority of the latest reports tend to show that hereditary influences are only present in a small minority of cases. Dr. J. B. Deaver reports 370 cases of breast cancer in which only 37 relatives died of cancer and 22 relatives of the patients with less malignant growths died of cancer. In one of the large German clinics the disease was found to be a family affection in only 20 cases in a period of nine years, but the idea was expressed that these figures were probably too low, because on account of the great fear of cancer among the laity, it was often thought wise not to inform the patient or her relatives of the true character of her disease. No competent physician, then, I take it, would hesitate to make a diagnosis of breast cancer simply from the fact that an hereditary cancer history is lacking, but in case we are able to obtain it, the indication for early removal is even more positive.

In the development of breast tumors and in making a differential diagnosis trauma plays an important part. More than 80 per cent. are said to occur in married women, a previous history of mastitis is frequent.

I have heard Dr. Jno. B. Murphy say repeatedly, speaking of cancer in other parts of the body, that it usually is the sequence of repeated mild irritations, chemical or physical. He claims that in cancer of the breast we have an exception. He says, "the role of trauma in the genesis of this disease in the breast, however, is a peculiar one. It seems to bear much the same etiologic relation to cancer of the breast that it does to sarcoma in many location in the body.

In cancer of the lips, stomach, tongue, skin, etc., there is usually a history of long-continued irritation of frequent mild traumas, and as a result of these recurring slight insults, either a displacement of epithelial cells through the basement membrane takes place or the basement membrane is thereby so weakened that it becomes permeable to the growth of epithelial cells and that constitutes the microscopic picture of carcinoma. With cancer of the breast on the other hand, one finds

the most frequent etiologic factor to be a single trauma of moderate severity, not mild, and yet not severe enough usually to produce a laceration of the skin. He has rarely if ever seen a carcinoma arising in a breast where a previous operation was performed for a non-malignant cyst; nor a cancer springing from a scar in the breast or from a stab wound; but rather it is an injury to the breast of the contusion type producing a stinging or aching for a short time and leaving no immediate apparent disturbance of the gland, which finally, one and a half or two years later at the point where the trauma occurred, is followed by the development of a carcinoma. That relation to a single injury is true of breast cancer but not of cancer of the stomach or uterus. A clean cut history of trauma should be obtained wherever possible. The length of time that has elapsed between the trauma and the onset of the tumor is important because in the young it bears a closer relation to the final manifestation of the disease than it does in the aged for it takes the aged longer to produce the gross manifestations after trauma, than it does the young individual.

When we see a lump in the breast or an enlargement of any kind, it is very important that an early diagnosis be made. We are all too prone to wait and see. We as general practitioners recognize the great value of an early diagnosis in appendicitis and know that delay means death and while more slowly in a breast tumor, if it be cancer, yet not less surely.

To determine whether a lump in the breast is benign or malignant is often impossible at the beginning, but when it is first seen there are certain landmarks usually to be found and these facts should be definitely fixed in our minds before an opinion is given.

Is there a tumor in the other breast, the age of the patient, has she ever had an injury to the breast, if so, how long before the growth was noticed, is there pain is the lump movable is the nipple retracted, is there any discharge and are the lymph nodes enlarged, are all questions of vital importance.

These things can be and should be found out in every case. The growth of the neoplasm is much more rapid in malignant than in benign.

The latter usually remain free or detached and if at all superficial can be rolled under the finger, indicating the absence of adhesions. In malignant tumors, on the contrary, adhesion to the surrounding tissues become at once evident, their limits, even in the beginning being practically indefinable while later on

the cutaneous and all the underlying tissues become incorporated in the tumor.

The density of the growth and the aspect of the skin, also afford a clue. Benign growths are usually soft and elastic when pressed upon, while malignant neoplasms are hard and lumpy. The skin retains its softness and usually rides freely over the benign tumor, while over the malignant one the skin becomes abnormal and assumes a leatherly aspect.

In benign growths the nipple usually remains free or merely distorted by the change in the shape of the breast. In cancer it is drawn into the organ and held fast in that position by fibrous bands.

The lymphatic glands of the axilla rarely, if ever become enlarged in benign growths; if they do at all the enlargement is slight. In malignant growths they are always more or less enlarged, and steadily increase in size as the disease progresses.

Pain is usually not present in beginning breast cancer but becomes rather severe as the disease advances. Benign growths are also as a rule not painful, with the exception of chronic hyperplasia of the gland, which is usually very painful.

At the last meeting of the Clinical Congress of Surgeons of N. A. Dr. W. L. Rodman opened the discussion on this subject and his remarks were so to the point and based on such a large experience that they cannot fail to be of great value to one who is interested in making a correct diagnosis.

He said that chronic fibrous hyperplasia with cysts, the result of abnormal involution of the breast, is often mistaken for cancer. It generally occurs about the menopause but may be seen in patients from 20 to 30. It differs from cancer in that it is frequently bilateral and painful (early cancer is not painful). The pain is increased before each period, and the superficial veins become enlarged. Cancer, unlike benign neoplasms, soon becomes fixed, but the fixation at first is so slight as to be detectable only by careful examination. Dimpling of the skin, however, slight, indicates cancer unless chronic mastitis has previously existed. Too much attention has been paid to dimpling of the nipple.

It does not occur in more than 52 per cent. of carcinomas, and is present in 5 per cent. of benign growths and more often in abnormal involution. There is the difference, however, that in cancer the nipple, as well as retracted, is infiltrated, fixed and immobile, whereas in benign growths the nipple is mobile.

The differentiation of benign from malignant cysts is even more difficult than in the

case of solid tumors. Thick granular discharge from the nipple is suggestive of carcinoma; in abnormal involution the fluid is fairly sanguineous. Pure blood nearly always means a papillary cystadenoma.

In at least 25 per cent. of the cases a skilled diagnostician will fail to make a correct diagnosis. The proper way is exploratory incision. Benign growths are convex on section, pink or pinkish-white; malignant growths are usually concave and creak under the knife and have a gray tint.

Though the expert may be able to distinguish benign from malignant growths by inspection, the only safe way is a frozen section at the time of operation. A cyst can, of course, be punctured with a hypodermic needle and the fluid drawn off, this helps to clear the diagnosis and may save an innocent breast from complete amputation, however, as Dr. Murphy has pointed out, you may find within the cyst a papilloma and that papilloma may become malignant. In such a case the fluid is usually a gummy bloody fluid. It would be a great stride forward if some clinical or laboratory test could be devised that would be pathognomonic of cancer but as it is, we must depend on the history of the case and the clinical signs.

The diagnosis should be made early and when it is made no time should be lost in advising a suitable operation. Dr. Murphy says that if you will analyze the statistics of the greatest of the modern operations—the Halstead—you will find that the extent of the operation controls the final result but little; that the time of the operation is what controls the result.

“Early diagnosis and early operation, rather than a late extensive operation are the important factors in determining whether a “cure” in the strict sense of the word can be obtained.”

It is well that we be familiar with a recognized classification of names of tumors of the breast including all varieties of both benign and malignant growths, but it seems to me that a division into groups, as to their condition when first seen by the physician, will be of immeasurably greater practical value both in making a diagnosis and advising appropriate treatment.

First of all are the tumors of slow growth which are movable and in which there are no swollen lymphatic glands and no retraction of the nipple.

In group two are the cases in which there is glandular metastasis but in which there are no adhesions to the skin or underlying muscles and in which the lymphatic glands are still movable.

In group three are the cases with adhesions with the skin or muscles or with both and with glandular involvement.

In group four are the cases with involvement of the supraclavicular lymphatic glands. It is said that when the supraclavicular glands are involved there is also intrathoracic metastasis. This may not always be the case but when cancer has progressed that far it is inenrable.

All cases in the first three groups should be operated on at once, the extent of the operation being governed by the report of the pathologist, the less pathology the greater chance of a final cure. The cases in the fourth group are beyond more than temporary benefit and it is doubtful if surgery should ever be attempted.

Recurrences following operation have been so common in the past that it is difficult at times to be optimistic in regard to the final results, but the outlook is improving and only by careful observance of the signs as we know them and by the family physician, who is the first to see them, making a prompt diagnosis, and advising immediate surgical removal can the situation be improved.

DISCUSSION.

H. H. Grant: To me, an important point in the management of breast tumors is to get an opportunity to examine them. Many women still conceal the fact that they have tumors of the breast until it is too late to do anything for them. The fact, as brought out by Dr. Lukins, that in twenty-five per cent of cases, even the most skilled diagnostician is unable to make a positive statement as to the character of the tumor emphasizes the importance of adopting the radical measure of extirpation in all doubtful cases. In view of the facts that diagnosis in many instances can never be positively made, that tumors demonstrated to be benign may later undergo malignant degeneration which will result fatally, and that the breast is an organ which can be spared without any real loss to the woman, I would go even further than Dr. Lukins and the authorities he has quoted, and say that in all cases where there is a suspicion of malignancy the breast should be promptly and thoroughly removed; and that in all women who have reached the age in which malignancy most frequently manifests itself,—say from thirty-five to fifty years, any growth in the breast which can be demonstrated to be a tumor (not a mere swelling due to inflammation or chronic mastitis) should be removed irrespective of its character.

A. D. Willmoth: If there is one thing in connection with all forms of malignancy that should be emphasized, it is that its cure or relief depends, not only upon surgery, but, to a greater

extent, upon the time that the surgeon gets the case. All cancerous growths are local in the beginning and if the surgeon gets the case early enough, relief is practically certain. Many patients with tumors of the breast are advised to wait until there is some definite indication for interference. This is wrong. If we wait until there is involvement of the glandular system, the chances for effecting a cure are very slim indeed. The growth should be removed while it is small by means of an incision along the upper border of the breast, turning it over and removing the growth, which should then be carefully examined. This operation leaves no scar in the breast proper and does not interfere with its function in subsequent pregnancies. If the growth is found to be malignant, the entire breast can be removed at a later operation. If it is benign, we have the satisfaction of knowing that we have removed a neoplasm that, in thirty-seven out of one hundred cases, would later have become malignant. Therefore, I believe, as advocated by Richardson, Rodman, and others, that every tumor of the breast should be removed at the time it is first noticed.

W. C. Dugan: That it is a wise plan to remove all tumors of the breast when they are first noticed has, I believe, been pretty thoroughly established. However, in young women, I do not believe that the entire breast should be sacrificed unless it is absolutely necessary. I am sure that malignant tumors occur in young people much more frequently than has heretofore been believed. I recall a number of such cases particularly a case of sarcoma of the breast in a child of eleven years.

The result of surgical interference in these cases depends largely up on the time we see the case, but I believe that no case of carcinoma of the breast should be turned away as absolutely hopeless. I have operated upon some apparently most unfavorable cases, in which there has been no recurrence of the condition.

M. Casper: Statistics of the larger hospitals show that, in the average case of malignant growth of the breast, about thirty months elapse between the time the growth is first noticed and the time the case comes to operation. When this fact is considered, one can understand why the results of surgical interference in these cases have not been better.

The symptoms of cancer of the breast as described in many of the text books, especially the older ones, are altogether misleading, in that, for the most part they are symptoms of the final stage of the disease, such as retraction of the nipple, sinking of the skin, pain, etae., which we now regard as indications that the disease has attacked the deeper structures and is in an advanced stage?

I wish to indorse the point that it is a better

plan to excise a tumor of the breast rather than to remove a small section for examination with the idea of doing a more extensive operation if found to be indicated because, by the latter method, there is more probability of breaking loose some of the cancer cells and freeing them into the circulation or lymphatics, with the consequent danger of metastasis.

J. B. Lukins, (Closing): In presenting this subject, it was not my purpose, and I did not presume to say what kind of an operation should be done nor how extensive it should be. I simply wished to emphasize the fact that it is the general practitioner who sees these cases first. No man, no matter how experienced he may be, can tell, from looking at a tumor of the breast, whether it is benign or malignant. We do know, however, that in ninety-five per cent. of such cases the tumor either is, or will later become, malignant. Therefore, it is our duty in all such cases to acquaint the patient with the danger attendant upon allowing the tumor to remain, and urge its immediate removal.

THE PRESENT STATUS OF THE DIAGNOSIS AND SURGICAL TREATMENT OF GASTRIC AND DUODENAL ULCERS.*

By JNO. R. WATHEN, Louisville.

When asked to read an essay before this society composed as it is of those engaged in such a variety of general and special departments of medicine, the writer decided that it would be best to offer for consideration a brief resume of some of the latest ideas concerning the diagnosis and the operative treatment of gastric and duodenal ulcers, illustrated by lantern slides showing the technique employed.

With the rapid strides that medicine and surgery are making to-day, it is impossible for most of the profession to keep up with the progress and many changes made in special departments like abdominal surgery. Only those who are constantly doing such work and devoting time to its study can be expected to keep fully abreast of the progress.

This paper, therefore, is not intended so much for the abdominal surgeon as for the general practitioner, so that he may understand what is best to advise his patients concerning operative treatment. It is only by the association of the practitioner with the surgeon in routine work that we obtain our best results, and this has been amply demonstrated in some of the large clinics of this and other countries where the correlation of labor

has attained most brilliant results. Early diagnosis by positive and accurate methods will enable us to obtain results which in the past were not obtainable; and that most dreaded of all diseases, cancer of the stomach, will be almost eliminated when we apply early and proper treatment to the pre-existing ulcer.

It might well be said that probably the most noteworthy advance in the diagnosis of gastric and duodenal diseases is the use of the X-ray examination after the introduction of bismuth into the digestive tract.

Quervain has recently said: "The extent to which surgical operations in cases of gastric ulcers may be successfully performed depends chiefly upon our ability to diagnose."

Undoubtedly the operations for gastric and duodenal ulcers are the most gratifying and the finest achievements in modern surgery. Many of these cases which were formerly treated as "gastralgiæ" and "gastric neuroses," until an accidental hemorrhage or acute perforation set in, are now easily recognized by the Roentgen examination and treated before serious complications or possibly a cancerous condition has developed.

Mayo has said: "The laboratory tests, so long depended on and which had proved so fallacious a guide, have been justly relegated to a minor position. These tests should not be abandoned, however. They are of value in differentiation, and since they may now be checked up by other means, this value should increase as we learn correctly to interpret their results."

Carman believes that the value of the X-ray in the diagnosis of lesions of the digestive tract is not generally appreciated and notes that in the laboratory of the Mayo clinic cancer has been diagnosticated in over 90 per cent. of the cases, gastric ulcer in over 80 per cent. and duodenal ulcer in from 50 to 60 per cent.

His technique may be defined as the combined fluoroscopic and roentgenographic examination with the double opaque meal. There is no single, standard, normal, radiologic stomach. The average normal stomach will hold twenty-four fluid ounces of ingesta without discomfort; its contour is unbroken save by peristaltic waves and certain constant incisuræ; its walls are flexible; its peristalsis is neither excessive nor absent; it is more or less mobile between its points of suspension; and it will clear itself of its contents within six hours.

He lists the radiographic signs of gastric carcinoma in order of importance as follows:

1. Filling defects.
2. Altered pyloric function: (a) gaping

*Read before the Jefferson County Medical Society.

of pylorus; and (b) obstruction of the pylorus.

3. Advanced position of the six-hour meal.

4. Absence of peristalsis from involved areas of the stomach.

5. Diminished mobility and flexibility.

6. Diminished size of the stomach.

7. Antiperistalsis.

The positive roentgenologic diagnosis of gastric ulcer can only be based upon the presence of one of two signs: viz., the niche or the accessory pocket. Other signs which are corroborative but not diagnostic of themselves are: (1) the incisura, (2) hour-glass stomach, (3) residue in the stomach after six hours, (4) lessened mobility, (5) localized pressure-tender point, (6) delayed opening of the pylorus, (7) acute fish-hook form of the stomach with displacement to the left and down, (8) gastric hypotonus, and (9) antiperistalsis.

Von Eiselsberg in his recent address before the Clinical Congress in London said: "In spite of the progress made in the diagnosis of gastro-intestinal disease, among which I place the Roentgen examination first, the choice of the method of operation for gastric ulcer and its complications can best be made on the operating table when the abdominal cavity is opened. It is most important that the operator should satisfy himself whether there exists an ulcer with an unhealed surface or a healed ulcer, in fact a scar, and whether the ulcer is situated at the pylorus or at a distance from it."

When in possession of these facts he is in a position to decide which operation is to be recommended—gastro-enterostomy only, pyloric exclusion or as a last resort, resection.

The early recognition of gastric ulcers is not only of value for the immediate relief of the present distressing symptoms and the great risk of acute perforation, but also of that lurking danger of a cancerous formation on the old chronic ulcer base.

This danger is ever present although some of the greatest authorities seem to differ as to the percentage of its occurrence. Wilson and MacCarty examining specimens furnished by the Mayo clinic estimate that 71 per cent of the callous ulcers of the stomach present lesions of cancerous development, while others assign only 10 per cent, as the average frequency of a cancerous degeneration of gastric ulcers.

Hartmann, of Paris, says: "Without going so far with certain authors as to deny the existence of ulcero-cancer, which would be too radical, we think, nevertheless, that the development of a cancer upon a chronic ulcer of the stomach is rarer than certain recent au-

thors consider it to be." Kuttner, of Germany, further says that the termination of ulcer in cancer is extremely rare and that the apparent callous ulcer is often nothing but a cancer primarily.

The clinical signs of ulcer of the stomach and of the duodenum, as that of alimentary stasis, a sign of stenosis due to a lesion situated in the immediate neighborhood of the pylorus which may be on the gastric or the duodenal side, are generally well known.

Moynihan, of England, has even gone so far as to say that the typical syndrome of duodenal ulcer is a story of late pain, a painful sensation of hunger relieved by the taking of food, and that this is sufficient to determine in his opinion a diagnosis of ulcer by correspondence with the patient, even without an examination.

Considering the surgical treatment, and it might be well to emphasize the fact that for chronic gastric and duodenal ulcers there is no other means of safe and permanent cure, free from the after menace of cancer development, the tendency of the present is to excise completely the ulcer whenever possible.

Gastro-jejunostomy has been generally accepted as the most beneficial of all the surgical procedures for gastric and duodenal ulcers, but where there are complications and doubts as to malignancy, a radical resection is the only thing to be considered. Rodman has for several years advocated the radical operation and says: "If the ulcer, or ulcers, are situated at or near the pylorus, as they are in about 80 per cent. of all cases, and the pyloric end of the stomach and proximal portion of the duodenum can be easily mobilized, pylorectomy which gets rid of the existing ulcers, and prevents future ones to a large extent, removing as it does four-fifths of the ulcer-bearing area, is certainly the operation of choice. The frequency with which hemorrhage, perforation and cancer, especially the latter, follow gastro-enterostomy, show it to be wholly inadequate."

Crile has recently voiced the opinion of the majority of the best operators when he said: "In cases of gastric ulcer, partial gastrectomy is the operation of choice, partly because of the uncertain cure by gastroenterostomy; and partly because of the probability of cancer development. In cases of duodenal ulcer, however, there is but slight probability of cancer development and the ulcer is curable by gastroenterostomy. The cure of duodenal ulcer may be hastened by the temporary closure of the pylorus."

Only a few years ago it was believed that gastroenterostomy was the ideal treatment of chronic gastric and duodenal ulcers, but our failures to obtain a larger percentage of

permanent cures led to further investigation. From a careful resume of the whole subject, we come to the conclusion that the best authorities are fairly well agreed that gastro-enterostomy alone will permanently cure only a small percentage of cases; that those cases where there is no pyloric obstruction are less liable to cure unless we make a temporary or permanent closure of the pylorus; that all gastric ulcers, on account of the subsequent cancer development, should be resected by the knife or actual cautery; that duodenal ulcers, if possible, should likewise be resected; and lastly, that the Finney operation and partial pylorotomy have a larger field of usefulness than was formerly supposed.

DISCUSSION.

D. Y. Keith: I believe most American operators use both screens and plates in their X-ray work. Dr. Kelly and Dr. Church, of Boston, rely mainly upon plates. They make as many as thirty-five plates in practically every case. Dr. Church told me that, in his opinion, gallstones show on practically every plate. He said that he had recently gone over plates made eight or nine years ago, and that many of them showed gallstones that had never before been recognized.

I think it will tax the ingenuity of any one to distinguish between the shadows of gastric ulcer and spasm. Frequently one plate will show a shadow that looks very much like that of an ulcer, and another plate of the same stomach will show the duodenum absolutely normal. The use of atropin has been advocated to aid in this respect, the idea being that if a spasm exists, it will relax under atropin. That we may have spasm of the stomach and duodenum from adhesions in the abdomen, or from appendicitis, has been demonstrated. To make a diagnosis in these cases requires time and the use of many plates, and even then we cannot always be certain.

A. D. Willmoth: I believe that, with proper technique, a majority of gastric ulcers can be demonstrated by means of the X-rays.

With reference to operative procedure, the relief afforded by surgery is mechanical, and it must be done in a workmanlike manner. Where we simply make a gastro-enterostomy for the relief of ulcer of the stomach, it does not afford complete relief in many instances for the reason that the opening from the stomach into the gut will not serve to carry the contents of the stomach for very long; it soon closes to such an extent as to force the pyloric end of the stomach to do the majority of the work. Furthermore, it has been demonstrated that it is impossible to close the pyloric end of the stomach and make it remain closed. The Finney operation is far superior to a gastro-enterostomy, for the reason that

we do away with the vicious circle made by attempts on the part of the pylorus to continue its work.

M. Casper: Improved X-ray methods have practically revolutionized stomach surgery in the past few years. With the diagnosis once made, the technique of operation can be more readily mapped out.

In regard to gastro-enterostomy, it has been shown, by experiments upon animals, that, following a gastro-enterostomy, bismuth given by the mouth enters the duodenum from the stomach through the pyloric opening. Other experiments upon dogs with the use of a lead ball attached to a thread, has shown that it passed into the duodenum through the pyloric opening in nine cases out of ten. In the other instance, it passed out through the gastro-enterostomy opening, then back into the stomach and out through the duodenum. One advantage of gastro-enterostomy is that it permits the biliary contents and the secretions from the duodenum to get back into the stomach, thus neutralizing the excessive acidity which is usually present.

Jno. R. Wathen, (Closing): Statistics from Mayo's clinic shows that 90 per cent of cancers of the stomach, 80 per cent. of the gastric ulcers, and sixty to sixty-five per cent of duodenal ulcers can be accurately diagnosed by means of the X-rays.

Several things in this connection have been positively demonstrated in the past few years. One is that, in our operative work, we must go as far as the pathology goes. If we do a gastro-enterostomy and leave behind a half-healed ulcer, it will sooner or later light up again and the patient will have the same old chain of symptoms. Therefore, the thing to do is to remove the pathology as completely as possible.

The Early Diagnosis of Pulmonary Tuberculosis.—The prolongation of life by the suppression of preventable disease is of much greater value to the state than the cost of the means employed. To ward off the calamity of disease and to prevent the spread of a pestilence is to increase the sum of human happiness and to elevate the race. In the entire realm of preventive medicine, there is no factor more potent than early diagnosis, first, because disease is far more amenable to treatment in the early stages, and second, because early diagnosis affords greater advantages in preventing the spread of infection to others. It is the belief that a proper exercise of preventive medicine is of incalculable benefit to the people of the state and through it, this greatest pestilence may be limited in its spread to an absolute minimum and thousands of those afflicted with it may be saved.—Illinois State Board of Health.

NUCLEIN.*

By WM. SANDERS, Louisville.

There are in our *materia medica* a great number of neglected remedies which if employed in properly selected cases would yield wonderful results. The virtues of many drugs remain unknown for years until some medical bellwether sounds the tocsin, then they are heralded around the world. Witness the iodine craze among our surgical friends. Iodine was discovered in 1812, and less than five or six years ago any suggestion of its use as a local antiseptic would have been met with derision. It took one hundred years to popularize it.

Nuclein is a remedy that could and should be more widely used, therefore it may not be time wasted for us to spend a few minutes in its consideration.

By nuclein is meant that constituent of the cell by virtue of which this histologic unit grows, develops, and reproduces itself. Chemically, the nucleins are complex substances resembling compound proteids. They are arranged according to the products of decomposition of nucleoproteids, into three divisions.

1st. Cell nucleins, or true nucleins, yielding a proteid, orthophosphoric acid, and xanthine bases. Neucleoproteids, containing true nucleins, occur chiefly in the nuclei of the cell, but are found also in the protoplasm and may pass into the animal fluids when the cell is destroyed.

2nd. Pseudo-nucleins yielding a proteid and ortho-phosphoric acid, but no xanthine bases. They are widely diffused in animals and vegetables, occurring in the solid tissues and in the fluids of the organism.

3rd. Nucleinic acid yielding orthophosphoric acid and xanthine bases, but no proteid.

Therefore it may be noted that the nucleins are complex proteid bodies notable for the large amount of phosphorus they contain.

Nuclein is a component of various portions of the animal economy, for instance the liver, spleen, salivary glands, lungs, testes, semen, ovaries, spermatozoa, brain, spinal cord and other nervous tissues, thymus and thyroid glands have been examined chemically with the result that nuclein has been found to be the most important proteid substance present. Wherever nature provides for the elimination of poison or waste products of any description, there we find nuclein present both in the secretions and in the tissues. With our present knowledge of the structure of the white and red blood corpuscles and of the lymph

corpuscles we are justified in stating that the most important constituent of them is nuclein.

Nuclein is administered to increase the defensive power of the blood against infections. It was the epoch-making theory of Metchnikoff that the leukocytes, or the phagocytes, as he called them, are natural defenders of the body's health, having the power to meet and repel an invading bacterial army, which first led to its use.

In nearly all of the infectious diseases, except typhoid fever, influenza and measles, there is a marked increase in the number of leukocytes. Metchnikoff regarded the multiplying cells as the "army of defense." If its integrity could be maintained, the invasion might be repulsed; if it failed, as often happened in severe cases of pneumonia, the day was lost.

Dr. Vaughn, of Ann Arbor, was one of the first to suggest the use of nuclein to therapeutically utilize this great fact. Since "the polynuclear white blood-corpuscles are active agents in preventing or retarding the multiplication of pathogenic germs in the body," it is rational therapy to give a medicine which will increase these substances. "This increase in the polynuclear corpuscles," said Vaughn, "may be induced by introducing into the animal the most destructive constituent of these cells which is nuclein."

Therefore it is a reasonable deduction that nuclein should prove of value in treating conditions where it is desired to increase the germicidal properties of the blood, and this includes practically all of the infectious diseases and local infections and applies to the prevention of disease as well as to its cure.

Although nuclein is given to produce an increase in the number of leucocytes, there is some evidence that it raises the opsonic index. The leucocytes destroy germs by virtue of some constituent or secretion, to which is due the germicidal properties of the blood serum. It is possible that their secretion is the substance called opsonins, if so, the more leucocytes, the higher the opsonic index. Two observers, Chautemerse and Nilhit, did find that in a case of intestinal perforation the opsonic index normally 1.6 rose to 2.5 within twenty-four hours after the injection of nuclein. My own experience leads me to believe that its use enhances the value of vaccines.

I have given nuclein in all cases of infections of whatever character for the past ten years and I am now more than ever satisfied with my results.

Cohen in his *System of Physiologic Therapeutics* has this to say of it: "Nuclein has been found to be a stimulant to all animal

*Read before the Jefferson County Medical Society.

cells. Given by the mouth or hypodermically it causes a marked leucocytosis in a few hours, principally affecting the active phagocytes. If in acute infections, protective leukocytosis is not sufficiently pronounced nuclein is of considerable value. It is indicated in such bacterial diseases as diphtheria, scarlet fever pneumonia and septicemia. Nuclein has been strongly recommended in tuberculosis and, with streptococcus infection, it would seem good treatment to increase the fighting power of the leukocytes. The value of nuclein as a carrier of phosphorus should cause it to be utilized in cases of nervous debility, depression and degenerations."

Nuclein is marketed in tablet form and in solution, either as a nucleinic acid or a sodium nucleinate according to the company which manufactures it. It is a white amorphous powder, soluble in water and insoluble in alcohol. It may be administered by the stomach, dissolved on the tongue, subcutaneously or intravenously. The stomach route is the least effective. However, when so given it should be administered frequently in large doses and on an empty stomach. It should not be taken within an hour after eating.

The buccal route has given better results in the hands of many, and is to be preferred when the subcutaneous or intravenous methods are rejected. The dose depends upon the age, weight, the character of the infection and frequency of administration, varying from 2 to 60 minims. In acute conditions 2 to 10 minims may be dropped on the tongue every hour, in chronic cases 10 to 60 minims two to four times daily. The tablets which represent 2, 5 and 20 minims of the solution, will be found very convenient.

The hypodermic method is employed where a marked physiological action is desired. The dose is 10 to 30 minims. Intravenously it is given diluted with physiological salt solution, dose 30 to 60 minims, using the ordinary technic for such work.

I will briefly mention three surgical cases in which I feel sure nuclein gave some very good results.

Case I. E. S., male, age 32, operated on for hemorrhoids on March 13, 1913. Six days later he came to my office complaining of the delightful odor of the colon bacillus infection. He was given the 5 minim nuclein tablets, one to be dissolved on his tongue every three hours, and in forty-eight hours the odor had disappeared and a slimy, unhealthy appearing wound had changed to one with a clean, granulating surface.

Case 2. C. W., male, age 35, typical symptoms of appendicitis, operation by Dr. Farmer July 2, 1913, about 60 hours after the onset

of the attack. The appendix was found to be gangrenous, there was no meso-appendix except on the distal third. It was bound down to the bowel so that it was necessary to split the peritoneal covering and dissect it out. It was so friable that with scarcely any traction it ruptured. The contents escaping into the peritoneal cavity on the outer side of the cecum. This was carefully sponged out and free drainage was instituted. He was given 15 to 30 minims of nuclein solution on his tongue every three hours. In 36 hours his temperature was normal and in a few days he remarked that since they had been putting that stuff on his tongue he was feeling so much better and stronger. He left the hospital on the 21st with the wound so nearly healed that it required only two more dressings. He was also given one c.c. of Van Cott's vaccine several days after the operation for the relief of a troublesome cough.

Case 3. R. K., female, age 12, latent sinus infection complicating mastoiditis, further complicated by arthritis in angle joint from infected thrombus. Ligation of the internal jugular by Dr. Jno. R. Wathen, radical mastoid and opening of the lateral sinus by Dr. G. C. Hall. I had her under observation about one week before the operation during which time she received the 5 minim nuclein tablets, one dissolved on the tongue every three hours and one dose of Van Cott's vaccine.

After the operation she received 15 minims of the solution dropped on the tongue with a medicine dropper, and in a short time not over three or four days the temperature which had been at times as high as 105 degrees after the chills, had dropped to normal and the arthritis had disappeared. She made a very quick recovery.

I could, if time permitted cite a great number of cases not surgical in which nuclein has been employed. They would cover the whole field of infections, general and local. All ages and conditions.

There is one fact that cannot be disputed. Nuclein will do no harm. There will be no bad effects, no matter how large the dosage, except perhaps in some patients, if given over a length of time some gouty pains from the increase of uric acid. In such event give alkaline diuretics and, if necessary, diminish the dosage.

Nuclein is a non-poisonous germicide which if given persistently would often change the course of many a desperate case to a favorable termination.

DISCUSSION.

Chas. Farmer: Just a word in regard to the case I saw with Dr. Sanders. The appendix had ruptured and an abscess had formed. The appendix was removed and drainage instituted. The wound healed rapidly and the patient made a beautiful convalescence. Whether or not the convalescence was influenced by the nuclein treatment, I am unable to say. Of course we have all seen such cases recover without this treatment.

Moynihan's late work on abdominal operations cites some experiments in which a number of dogs were given injections of nuclein, the abdomens opened, incisions made in the intestines and the entire contents expressed into the immediate neighborhood of the abdominal incision. Of the five dogs in which this was done, all died but one and he was very sick. In another series of ten dogs, nuclein was introduced intraperitoneally, and the same operative procedure carried out, and all of these dogs recovered.

The theory of the injection of nuclein is that it produces an increased leucocytosis, which is an important factor in the prevention of infection.

MEDICAL INSPECTION OF SCHOOL CHILDREN.*

By C. J. ROSENHAM, LOUISVILLE.

The experimental period of the medical inspection of school children has long passed. Long ago the great good that comes from the careful inspection of the child, the recognition of insidious diseases in their incipency, calling attention of the parents and teachers to the same, and then seeing to it, that the child receives the attention needed, has brought results and proofs, putting the question beyond all controversy.

The most astonishing view of this question now, is that it was unrecognized and neglected so long, and a matter of surprise and regret even to-day, is that in some quarters the support is only half-hearted, and the appropriation to cover the expense of this work is altogether inadequate to bring the best results.

Brussels, Belgium has the honor of first recognizing and putting into practical operation the medical inspection of schools, in the year 1874,—and the other countries of Europe following close thereafter. In the United States of America, Boston, Mass., is the city first to introduce regularly the school inspection, in 1894; other cities throughout the States following rapidly this most excellent example, until to-day we have over five hundred American cities with medical inspection in their schools.

When work along this line was first tried out in England, it was with the school nurse alone. In other countries of Europe they experimented with the doctor alone. Neither of these plans gave good results, as may very readily be understood, the nurse was not able or privileged to make diagnosis, the doctor could not do the follow-up work into the homes, and it takes both of these working together, to bring about the desired result. While both doctor and nurse are absolutely necessary to carry on the fight against disease, the doctor, ever alert and on the lookout for physical defects, communicable diseases or parasitic infections, excluding from school if necessary for the protection of the many; notifying parents of insidious troubles, to consult their own physicians for diagnosis, and treatment, and actually, keeping a watch on the child to see that attention is given to the warning. The nurse is needed, when the school doctor finds that no attention has been given to the child, the nurse is given the child's name, residence and diagnosis and her duty is to visit the home, ascertain the cause of non-attention.

In the great majority of cases it is found that the inability of the parents to pay for service is the cause of seeming neglect. When the nurse is convinced of this condition, it then becomes her duty to see that the child is taken, either to the office of the doctor who is willing to give of his time and knowledge for humanity's sake, or to one of the public clinics, naturally the city hospital gets most of the work, however as a rule not until the nurse has paid several visits to the home to explain the necessity, our honesty of purpose, and that we are not urging the matter from any selfish motive. When this is accomplished, it most frequently happens that the nurse is compelled to accompany the child to the hospital and pay the carfare, the parents not being able to do so, or indifferent; this takes considerable time, and the necessity and vital importance of the work I am sure you appreciate. The associated and federated charities surely do, for in the one item alone of defective vision, they paid for the glasses of something like one hundred and fifty children, during the past year. I do not propose to occupy your time by giving statistics, a summary of it all can be found in the annual report of the health office, a copy of which is either mailed to every physician in the city or can be had for the asking. We have to-day about one hundred public schools and thirty-five parochial schools to look after: forty-two thousand children. The work is divided among four medical inspectors and two school nurses. Every child in the schools must be carefully examined at least once a year. You

*Read before the Jefferson County Medical Society.

can very readily see the impossibility to do thorough work or to get satisfactory results in all cases. To the good, intelligent women and through their organizations, the city is largely indebted for the nurses that we now have, and they have a promise of two more which we surely need and I beg for the earnest support of this society collectively and individually toward this end.

Nineteen fifteen is the first year the vaccination of the school children has been placed in the hands of the school physician and I believe this is the proper place for it, for the reason that we are in the schools daily throughout the year and are prepared to vaccinate, whenever the occasion requires. While the medical inspection of school children is comparatively a new activity, still it has been in force long enough to have convinced the most skeptical of its tremendous value both in the prevention of epidemics, of disease, and the arrest of disease in its incipency, and the most difficult thing to understand is, the reluctance which some of our municipalities display in providing adequately for this work. The way we are constituted to-day it would appear that we place far greater value on property than we do on health or life. Millions are spent annually for the detection and punishment of petit larceny, but to prevent disease there is quite an epidemic of indifference. We have men among us who deery vaccination, they are about on a par with the men who belittle education and we have to blush in acknowledging that during our campaign to carry schools to the illiterate districts of our State, opposition was met from some few men who blamed education for all the ills and crimes of the cities and towns. Of course such opposition is born of ignorance. How men of education can honestly hold out to-day in the light of all the proof and experience, against the vaccine immunizing practice is beyond the comprehension of a normal, logical brain. And when people will not be convinced by the overwhelming proof of past experience, there is nothing left but compulsion, and Kentucky may be thankful and proud of the fact that we have laws both for compulsory education as well as vaccination.

Quite a stir was created in this city last winter when the newspapers heralded the fact that several United States surgeons were here to go through the schools to search out trachoma. The reporters made the most of it and some sensational articles appeared, so that not only the layman was made uneasy, but the ophthalmologists as well, naturally feeling that their diligence and skill in diagnosing especially this one disease had been challenged, when it was published that two per cent. of

trachomatous eye-lids had been found in the schools. It was my duty as one of the school inspectors to accompany the United States inspector on his rounds. This was not a new experience for me by any means as I had the opportunity of examining the eyes of three hundred and fifty children mostly from the mountain districts of our State where the means and manner of living were not of the best and where trachoma has long been prevalent; these children are the wards of the Masonic Widows and Orphan's Home, on whose staff of physicians I am, and in assisting Dr. John R. Wright, the ophthalmologist, I had ample opportunity to become familiar with follicular conjunctivitis, granular conjunctivitis or trachoma whichever the infection may develop. There are constantly under treatment at the Home from twenty to forty cases; when they are chronic and catarrhal and do not yield to treatment, they are operated on. It was my privilege and pleasure to be present at a meeting of the Eye, Ear, Nose and Throat Society several months ago where a very able paper was read on Trachoma, and very fully discussed. There were five boys ranging in age from five to eight brought into the room. They were from the Industrial School of Reform and brought to the hospital for treatment. The United States Government Surgeon pronounced all five cases trachoma, the essayist of the evening pronounced all five cases follicular conjunctivitis. I was led to conclude from the paper read and the discussion following, that there was very probably an arbitrary and hasty diagnosis made by both gentlemen. The consensus of opinion and positive conclusion reached by all was, that trachoma is a specific infection the bacteria of which has so far not been isolated, therefore the only positive means of diagnosis was the chronicity of the disease and consequent destruction of conjunctival tissue, or the stubborn persistence of the disease not yielding to simple treatment, whereas folliculitis or follicular conjunctivitis will yield quickly to treatment and frequently get well without any treatment at all. The lesson I learned at this meeting was a very valuable one to me, it taught me to be very cautious about writing trachoma on the diagnosis card of the child notwithstanding all the experience of the Masonic Home and the ten thousand children I examined with the United States Government surgeon, and again I am not so very jealous of my prerogatives or ambitions to insist on a positive diagnosis, especially where there is no harm to come from a watchful waiting. Therefore I am now marking my diagnosis cards where I find a mild conjunctivitis—for observation.

If the disease persists I mark the card follicular conjunctivitis and send notice to the parents to take the child to their ophthalmologist for treatment.

If I find my warning goes unheeded and the disease growing worse, I then change the diagnosis to trachoma or granular conjunctivitis, and insist on the attention of a specialist. If still neglected the child is excluded from school, to impress on the parents of the child that we are in earnest about our work. The nurse is then put on the case, visits the home to find the cause of inattention and if poverty is found to be responsible for conditions, she secures treatment through one of the several avenues she has to choose from. This is about the procedure followed in all the chronic ailments such as enlarged tonsils, adenoids, defective vision, hearing, teeth, anemia, eczema, nervous diseases, etc.

However there is another side to this picture, there frequently arises the occasion when the medical inspector of school children must thoroughly understand his work, be positive of his diagnosis and have the courage of his convictions and see to it that his directions are carried out, and that is when the communicable diseases and infections are in question. The more acute contagious diseases are not very often diagnosed in the school. Scarlet fever, diphtheria, measles, smallpox, chickenpox, whooping cough, etc., for the very good reason that the prodromal symptoms are so pronounced that the mother is the first to notice them, keeps her child at home and sends for the family doctor. But such conditions as scabies, pediculi, impetigo contagiosa, acute catarrhal or suppurating trachoma, where the child must be excluded for the protection of the other children, or a suppurating discharging, foul-smelling otitis media or ozena, these are the conditions most frequently found, and naturally more often among the children whose parents cannot pay a physician. These are the cases that give us the most concern and are the great majority of all the cases found, for our interference, the school nurse in most of these cases must accompany the child to the hospital for treatment. We meet with parents who are overly sensitive and unreasonable about the possibility of their child having the itch, nits or pediculi and resent the diagnosis, and exclusion from school, and I am sorry to say that sometimes a physician is found who will so far forget his obligation to the community that he will yield to the wishes of the family who may be his patients and deny the diagnosis. This is unfortunate for the family doctor alone, because when a child is excluded, the diagnosis is so positively

demonstrated to the teacher and principal of the school, that a mistaken diagnosis is well nigh impossible. At least we insist that the child remain away from school until it is cleaned up and the disease cured, and although our diagnosis may be denied our directions are carried out and the child returned to school clean.

All kinds of subterfuge is resorted to, to avoid vaccination, by those who do not understand, or are afraid, or do not believe in it. ("I have been vaccinated and it did not leave a scar"), ("I have had the smallpox, but there are no pits visible"), ("My ma is going to have me vaccinated by our family doctor next week")—but next week drags into months. ("The doctor says my blood is not in condition," etc., etc.) until we are convinced that an evasion only is aimed at, and then must come exclusion for refusal of vaccination. Again it is to be regretted that the family doctor will too readily lend himself to the wishes of his patients and sign a certificate of successful vaccination when there is no sign of a scar or a pit, as this is the only evidence of successful vaccination that the school inspector has to go by, he, in all honesty to himself and to the community must insist on revaccination until successful. The cause of most of the unsuccessful vaccinations is that the points or vaccine have not been kept in the ice-box, for when exposed to a temperature of seventy degrees or over, for four or five days, it becomes perfectly sterile. In summing up I wish to emphasize what seems to me to be the cardinal principles of the medical inspection of schools and school children. The detection of contagious, infectious and communicable diseases, the exclusion of those so suffering for the protection of others. The detection of insidious and chronic diseases, to call them to the notice of parents or guardians and refer them to their family physician, the finding of physical defects with the same reference as above. If the families afflicted, are unable to help themselves to put into motion such measures as will insure them aid, free of expense. To encourage the teaching of the practice of hygienic living both at school and at home and where practicable talk to the children along that line, a general supervision of the sanitary condition of school rooms and grounds. This may seem quite a large contract for the number of physicians employed, but if the plan is adopted to make every teacher and every principal your assistant, which they most willingly become when they understand what is wanted, the work becomes a pleasant task and the great improvement so quickly noticeable in the appearance of the children after treatment is a powerful

incentive to renewed effort for more and better work.

Help us get more school nurses, our children need them and at last that is where the greatest good to the greatest number is to be looked for, the nurse is the one that is entrusted with the duty of following the case to the homes, the clinics and watch them until a conclusion is reached. All this takes tact, patience and a great deal of time, so you can understand very readily how badly we are hampered in our work, two nurses among forty-two thousand children.

DISCUSSION.

S. G. Dabney: The teaching of hygiene and better modes of living to children and, through them, their families, is, I believe, one of the most decisive steps for the betterment of community life that has been taken for a long time.

Dr. Rosenham is not alone in the difficulty he finds in diagnosing trachoma. The border line is sometimes exceedingly hazy. Dr. J. M. Ray, in a recent paper, pointed out the fact that, of ten modern text-books, not a single one gave a satisfactory means of differentiating trachoma from follicular conjunctivitis. It is generally accepted now that the pathology of the two diseases is almost, if not absolutely, identical, although this is disputed by some. I believe that, until the laboratory men come to the aid of the clinical observers and discover a bacteriological cause for trachoma, we are all going to make a good many mistakes.

Speaking to the practical side of the subject, I believe that many mild cases—call them trachoma or follicular conjunctivitis—are not infectious—are not in a stage where they are likely to be communicated. Eye diseases are rarely communicated unless there is secretion, and until there is some discharge from the mucous membrane, it is not necessary to exclude them from school, nor is operative treatment demanded.

Still another group is composed of those cases in which we all agree that an operation is indicated, although the diagnosis can only be determined by the microscope. I do not admit that when such a case is relieved by a single operation without leaving a scar, it is evidence that the condition was not trachoma, because we know that the expression operation will sometimes cure trachoma.

Perhaps when we come to know more about trachoma we will find that it has many stages—some communicable and some not communicable; some, perhaps, self-limited. This is true of other diseases and there seems to be no reason why it should not be true of this one. Some of these cases recover without scars while others, in spite of all forms of treatment, will have pronounced scars.

Bert Gribble: The Public Health Service recently sent here by the Government to examine our school children found that from 1 1-2 to 2 per cent. of the school children in Jefferson County had trachoma. Under this head they included all suspicious cases. One of the gentlemen, Dr. Moore, has had a very wide experience along this line, having been in Government service more than fifteen years, doing quarantine duty at Ellis Island, where he examined a great many immigrants for trachoma. Whether the cases he had diagnosed here are trachoma or follicular conjunctivitis remains to be seen.

Adolph O. Pfingst: The evolution of the old school-house, with its poorly ventilated, dark rooms, roller towels, wooden buckets, with tin-cups, etc., into the beautiful modern, hygienic school building of to-day, is, I believe, largely due to the untiring efforts of the medical profession. Soon after the introduction of medical inspection in schools in this country, Dr. Luckett, of Minneapolis, pointed out that, of the twenty-odd million school children in the United States, something like eight million were afflicted with some form of eye, ear, nose or throat disease, and that children deficient in these respects soon become mentally and physically deficient and went to form a great portion of the idle poor and criminals. He later introduced, at a meeting of the American Medical Association, a resolution urging the legislatures of the various states to enact legislation providing for the medical examination of school children, and I believe such legislation is in effect in practically every state at the present time.

Passing over the question of the diagnosis of trachoma, I think Dr. Dabney struck the keynote when he said that every case in which there is a secretion should be excluded from school, while those of a milder type should be treated by their family physician, or at clinics, but allowed to remain in school.

In the agitation about trachoma, we should not overlook the fact that there are frequently other conditions in school children, which demand attention; for instance, myopia, or near-sightedness, which is present in a large percentage of children and progresses rapidly during the school term. Therefore, I think it is an important part of the medical inspector's duty to see that the vision of school-children is up to normal.

S. C. Frankel: When the medical inspection of school children was first begun, the inspectors encountered many difficulties in the discharge of their duties. To many of the children, especially the younger ones, the mere mention of the name "doctor" was sufficient to frighten them almost into hysterics. Again many of the older children, especially girls, objected to being examined. The principals and teachers of the schools were not enthusiastic about it because it necessitated con-

siderable extra work. Furthermore, the parents of many of the children objected to their being examined, and frequently sent messages by the children to the effect that they were able to pay for medical attention, and that if any examinations or treatment were necessary, their family physician could do it. What was most surprising was the fact that many doctors opposed it, probably under the impression that the inspectors were administering treatment. Necessarily, therefore, our first few months of work were mainly devoted to educating the children, teachers, parents and, to a less degree, doctors, as to the object of our work and its scope. We were considerably handicapped at first by the fact that we had no nurses to follow up the cases in which we discovered physical defects. It was only after about eighteen months that we were able to have nurses to follow up these cases and to ascertain what results were being secured. While I was doing this work I constantly advocated the need of more nurses for this purpose. Since that time the facilities have been increased and parochial schools have been added to the list and I am sure that this has very much improved the work.

C. J. Rosenham, (Closing): I would simply add that, at the present time, the principals and teachers are in hearty accord with the work, and are giving us their earnest support.

Red Cross Work in the Ladrones.—Prompt action taken by the American Red Cross in 1915, in response to an appeal transmitted to the Navy Department, kept from starvation a number of destitute persons on the Island of Rota in the Ladrones Group in the Pacific. On receipt of the appeal the American Red Cross, through the cooperation of the Navy Department, authorized by cable the loading of relief stores on the U. S. S. Supply at Manila, this vessel being ordered to stop at Rota and discharge the food sent by the Red Cross. After taking this action, the American Red Cross notified the Japanese Red Cross of the receipt of the appeal and thus the conditions in Rota were brought to the attention of the Japanese government. Through the American Ambassador at Tokyo, Japan, the government sent the American Red Cross a draft covering the original expense in Rota, together with thanks for the action taken.

Human energy produces wealth. The inherent power of production of one person may be greater than that of another, but the producing power of all persons is reduced, and often stopped altogether, by disease. It is the object of health boards to maintain at its maximum efficiency the producing power of the public, and to conserve it by lengthening life.

ACTIVE AND PASSIVE IMMUNIZATION; THE ESSENTIAL DIFFERENCE BETWEEN VACCINE AND SERUM THERAPY.*

By J. D. ALLEN, Louisville.

The object of both vaccines and sera is to cure and prevent infective diseases, by helping nature in the production of a state of immunity. We all know it to be a fact that nature is the most successful of all physicians and that infections can be cured only by nature. We all appreciate the value of drugs in helping nature to put forth her best efforts. We appreciate the value of the mechanical aid rendered by the surgeon, in removing the products and results of infections. But on the other hand we all appreciate the fact that not one, nor all the drugs mentioned in the *matéria medica* can immunize a patient against typhoid fever or smallpox, and not one, nor all the surgeons can cure diseased appendix. The curative and preventive features rest with nature and the remedy which nature uses is immunity. The only reagents at our disposal for causing nature to produce a state of immunity are vaccines and sera, and although these two reagents ultimately produce the same results, they are entirely different in their makeup and in their mode of action. They both produce immunity, the former an active, the latter a passive immunity.

Immunity, like pathogenicity is more or less a relative term, and might be defined as an animal's ability to overcome or prevent an infection; in other words what we term resistance. The serum of all animals recovering from infective diseases contains some substance or substances, the result of cell activity, which are detrimental to the growth of the bacteria, and the products of the bacteria causing the infection, to such an extent that these same bacteria in moderate quantities cannot infect the recovered animal; such an animal is spoken of as immune, and its condition as one of immunity. Of course we all understand that these substances are chemical products generated by the animal cells for protection, when irritated by bacteria or other foreign proteids, and in bacteriological terms are named according to their mode of action. The irritant (the bacteria or other foreign proteid) which stimulates the body cells to action is called the antigen. The product thrown off by the animal cell which splits the bacteria is called a lysin. The product which agglutinates the bacteria is called

* Read before the Jefferson County Medical Society.

an agglutinin. The product which neutralizes the toxin of the bacteria is called an antitoxin. The product which prepares the bacteria for cell digestion is called an opsonin, and all of these products which are the result of cell activity are included under the general term of amboceptor or antibody. The product which is found in the blood of all animals at all times, necessary to complete the reaction between the antigen and the antibody is called the complement. All of these products except the complement are specific, according to the antigen which stimulates their production. In other words the lysin which is stimulated by the presence of the staphylococcus will not split the streptococcus. In order to produce a complete reaction, necessary for the destruction of the antigen or bacteria, three of these products must always be present, the antigen (the bacteria or its toxin) the antibody and the complement. The final destruction of the bacteria, however, is due to the phagocytes which destroy or digest the bacteria after they have been prepared by these chemical products. As a matter of fact an excess of these chemical products are thrown off by the animal cells and are not utilized in the destruction of the bacteria but remain in the blood, ready to attack this same bacteria when it again puts in its appearance. This excess of these chemical products in the blood of an animal, generated by the animal cells for the destruction of bacteria,—constitutes what we call acquired immunity.

Acquired immunity may be either active or passive, according to whether or not the animal generates these products as the result of his own cell activity or receives these products in the blood of another animal which has been previously immunized. Active immunity then is due to the direct participation of the organism concerned and depends upon increased cell activity. Such immunity is gained at the expense and often at the risk of the organism concerned. Immunity to smallpox for instance, may be obtained either by an attack of the disease or by the common method of vaccination. However, in each and every case, the immunity depends upon a specific reaction on the part of the cells and tissues of the individual organism. Passive immunity on the other hand involves no active generation of the protective substances by the immunized animal. The latter is simply the recipient of the substances formed in the blood of another animal and transferred to the individual to be protected. In the preparation of the diphtheria antitoxin for instance, the horse is actively immunized by the injection of increasing doses of diphtheria toxin, and the blood of the horse comes to contain a pro-

teective substance, the so-called diphtheria antitoxin, which if injected into another animal renders that animal passively immune to diphtheria. The horse then is actively immunized and produces its own antibody, the animal which receives the horse's serum is passively immunized, receiving the antibody already formed.

HOW ACQUIRED IMMUNITY IS PRODUCED.

We have just seen that acquired immunity is either active or passive according to whether or not the animal which is to be immunized plays any part in the production of the immunity.

Active immunity can be produced, first by overcoming an infection, such as the immunity following typhoid fever; second, by the incorporation into the animal body of live but attenuated bacteria (that is bacteria which have lost their virulence to a certain extent), such as the well known vaccination against smallpox; third, by the incorporation of the products or toxins of bacteria, such as the immunity produced in the horse, in the preparation of diphtheritic antitoxin, by injection of the toxin of the diphtheria bacillus; fourth, by the incorporation of dead bacteria.

Passive immunity on the other hand can be produced only by the injection of the serum of an actively immunized animal, such as the immunity produced by antitetanic and antidiphtheritic sera. The method most used in the production of active immunity, both for prophylactic and curative purposes is the injection of dead bacteria which includes all of our well known vaccines.

The object then of both vaccines and sera is to produce a state of immunity, by causing the presence in the blood of the animal or patient, of this chemical substance, the result of cell activity, which we call an antibody. The vaccines cause the production of the antibody—the sera supply the antibody already produced.

HOW VACCINES AND SERA RESPECTIVELY PRODUCE AN ACTIVE AND PASSIVE IMMUNITY.

Vaccines which are simply a saline suspension of dead bacteria contain no antibodies or other substances which are detrimental to the growth of the bacteria and products of bacteria causing the infection. They produce immunity, by the same process which disease produces immunity and that is by irritating the animal cells—and causing the cells to throw off an excess of protective substances, or antibodies, which substances remaining in the circulation combine with the specific bacteria which are the antigens, in the presence of the complement, which is in the patient's blood, when and where ever they come in con-

tact. Vaccines, whether used for curative or prophylactic purposes then calls upon the cells of the patient to produce the antibody. On the other hand a serum which in itself contains the antibodies and other substances detrimental to the growth and the products of the bacteria causing the infection, produces a passive immunity by conveying to the blood of the patient the antibodies already formed by the cell activity of some other animal—and hence do not call for any activity on the part of the patient's cells. It is simply a passive process. The specific antibody contained in the serum combines with the specific bacteria or its toxine in the presence of the complement, found at all times in the patient's blood. Thus the immunity produced by a serum, in which case the antibody is already formed, is immediate. The immunity produced by a vaccine, in which case the antibody has to be generated is delayed.

Then both vaccines and sera, whether used for prophylactic or curative purposes, act by producing a state of immunity. The former producing an active immunity, the latter a passive immunity.

Immunity and its production theoretically, is such a pretty, easy, plain, process, that it seems that the body cells would laugh and grow fat during an infection, and that bacteria would be exterminated, and that all that would be necessary for its production would be an injection of a vaccine or a serum. As a matter of fact, however, successful vaccine and serum therapy constitutes more than the mere mechanical process of injecting. There is a rationale to this method of treatment. Suffice it to say, that not only must the successful physician be an immunizer, but the successful immunizer must be a physician.

Housing and Health.—Health News, issued by the United States Public Health Service, April 19, announces that plans have been completed for the erection of a series of model homes in the city of Washington to demonstrate the relationship between good housing and good health. They are to be known as the Ellen Wilson Homes and are not an experiment, but a demonstration. Congress has enacted a law which goes into effect July 1, 1918, by which all alley buildings in the district must cease to be used for dwelling purposes. Congress, in its act incorporating the Ellen Wilson Homes, limits the dividends to 5 per cent. net, but this enterprise will yield a far greater dividend, not in cash, but in satisfaction because of needed work well done.

ABSCCESS OF THE MESENTERY WITH GANGRENE OF THE SMALL INTESTINE.*

By E. S. ALLEN, Louisville.

Patient, lady, white, age 50. Family history negative. Personal history, no illness which would have any influence in producing present symptoms. This lady for a number of years has been suffering with a ventral hernia, which up until eighteen months ago, was reducible. Eighteen months prior to the time when I saw her in consultation with her family physician, Dr. Kessler, she complained of a great deal of pain in the abdomen and the hernia seemed irreducible. She had all of the symptoms of a strangulated hernia, which cleared up in a few days. She was advised at this time to seek operative relief, but as she states, "dreaded the knife." From time to time her physician advises operative relief. Each time it was refused. When I saw her, she was having a good deal of pain in the abdomen and running a temperature of from 99 to 100 in the afternoon. Her hernia was in the median line between the umbilicus and the symphysis and involving practically all of this area. The tumor was apparently the size of a fetal head, irreducible, tympanic over upper portion of mass and dull over the lower area. There was no obstruction to the intestinal tract, although the patient was very uncomfortable at times from gas pains. By means of bimanual examination, one hand in vagina, I could make out a solid mass which extended into the pelvis and seemed incorporated in the hernia above. My opinion was that she had a tumor, probably a fibroid, which was adherent to the intestines and with them being forced out through this hernial opening. I advised an immediate operation which was declined; but the patient getting no relief, in a few days consented to go to the hospital.

The abdomen was opened above the hernia and then the constricting ring incised from above downward. The skin which was lined with peritoneum was incised to the symphysis. I found at least three or four feet of the small intestine and a portion of the transverse colon making up the hernial contents. They were adherent to each other and had burroughed individual pockets into the subcutaneous fat and were adherent in these pockets. While dissecting the bowels out of these pockets and breaking up the intestinal adhesions, I palpated a mass larger than an orange in the mesentery of the small intestine. This mass was fluctuating and its covering seemed

*Read before the Jefferson County Medical Society.

to be of an inflammatory nature. That part of the bowel over this mass appeared to have its vitality materially embarrassed and I remarked at the time, that it would not have been very long before she would have had a gangrenous bowel. After thoroughly freeing all of the bowel from these hernial pockets and dissecting free the adhesions between the intestines, I protected the field with large saline sponges and explored this fluctuating mass in the mesentery. It proved to be pus, resembling the cold abscess variety. I made a two inch incision through the walls of the abscess, sponged the pus out and swabbed the abscess cavity with a 2 per cent. solution tincture of iodine. A rubber tube was placed in this cavity and secured with cat gut suture. A pint of olive oil was poured over the intestines with the hope of preventing adhesions. I was at that time using olive oil in an experimental way, trying to prevent post-operative adhesions. I have since discontinued its use and have no confidence in it.

A radical operation was attempted for the cure of the hernia, with the hopes that the pus in the mesentery which had been there for such a length of time, had become sterile. Abdominal fascia was overlapped and two rows of mattress interrupted sutures used. The tube in the mesenteric abscess cavity and cigarette drain being brought out through a stab wound lateral to the suture lines. This was one of the most extensive hernias that I have ever operated upon. Every inch of the bowel in the hernia sack was adhered both to the peritoneum and to adjacent coils. I felt that I had succeeded in dissecting free the bowel without doing any material damage to its peritoneal coat. Where there was a denudation of the peritoneal coat, I covered this up with an omental patch. Patient came off of the table in good condition. For the first four or five days apparently was running a normal post-operative course. On the fifth day, when the dressing was changed there was a decided fecal odor to the dressings. Upon the sixth day there was decided evidence of feces on the dressings. Edges of the wound began to look angry. The patient's general symptoms seemed good. She had a pulse of 90 and a temperature of 100. On the seventh day quite a quantity of fecal matter was on the dressings and the cat gut sutures in the skin were breaking down. This fecal discharge came through the cigarette drain and the tube that extended into the mesenteric abscess cavity. On the seventh day I removed two of the silk worm gut sutures and opened the incision at the point where the drain was and found to my discomfort that practically the entire skin had been

dissected up by the accumulation of fecal matter; which was of a light yellow color distinctly saturated with bile. Particles of undigested food were found in this discharge, and the discharge evidently was thoroughly saturated with the pancreatic enzymes as the fatty tissue seemed to melt away, where it was contaminated. There was little or no pus in the wound, one would have thought that a high ileostomy had been very successfully performed. Practically every bit of intestinal contents came through this opening. In a very short time after taking nourishment its character could be determined from the discharge. For a period of ten days this patient was given all of her liquid and nutrition per rectum and the discharge decreased materially. While changing the dressings on the wound which I had opened up a distance of about four inches to the fascia, I found an opening through fascia about two inches in length and a knuckle of bowel presenting itself with a hole in it about the size of a lead pencil, with a very small needle and fine silk I closed this opening and kept it under observation for five or six days at which time I regarded it as permanently closed.

The fecal current or (rather the biliary current for the character of the discharge now was largely of a biliary nature), seemed to come from a sinus which led in the direction of the symphysis. This sinus when plugged with iodoform gauze kept the wound fairly clean for a period of ten or twelve hours. The patient having been kept in a very good condition by means of rectal feeding, she was now taken to the operating room, given an anesthetic and the abdomen opened, when it was very easy to locate the leaking bowel. An area of the small intestine from three to five inches in length had completely slipped out down to the mesentery, and there was a separation of the two ends by a distance of about three inches. The agglutination that had formed were separated, the two ends of the intestines brought out of the cavity, trimmed off, closed and a lateral anastomosis performed. The abdomen was closed, a cigarette drain leading down to the anastomosis introduced. Fascia and muscle were closed with silkworm gut, not including the peritoneum. This patient developed no untoward symptoms following the operation and went home in three weeks. She is now in good health and does her own washing, cooking and housework.

I feel that sloughing of this bowel was produced by embarrassing its circulation in opening and draining this abscess, as the sloughed area was directly over the abscess cavity and this part of the bowel appeared embarrassed from a nutritive standpoint when the ab-

domen was opened primarily. The manipulation together with the trauma produced by swabbing out this abscess or probably a thrombosis, caused by manipulating this inflammatory area—interfered with the nutrition of this already injured intestine. The fact that I had both a cigarette drain and a rubber tube leading from this area and, too, that the bowel did not break down for several days following the operation giving time for protection and walling off and directing the leakage along the drains to the surface was what saved her life at the first operation. This was a very interesting and very complicated case and I take pride in her complete recovery.

REMARKS ON THE TREATMENT OF SYPHILIS, WITH REPORT OF CASES.*

By CHAS. W. JEFFERSON, Louisville.

The treatment of syphilis is a subject too enormous to be embraced in a short paper, such as I am presenting this evening, so I have selected a few cases which will illustrate some of the most common phases of the disease, and those which the general practitioner meets daily. The following case reports are examples of how some of the pathological conditions produced by the disease have been met and treated during the past four years:

Case No. 1. Mr. J. F., white, age 22 years, weight 140 lbs, single. Presented for treatment December, 1913, for sore on penis which he had for two weeks and tried to heal with hydrogen peroxide, with no results.

Examination. Chancre, double inguinal adenitis, no evidence of secondary eruption. Scrapings from sore showed spirochaeta pallida.

Wassermann +.

Diagnosis. Primary syphilis.

Treatment. Intravenous salvarsan every two weeks for four injections.

Mercury salicylate intramuscular injection grains 1 1-2 between each salvarsan.

February, March and April, intramuscular injections of mercury salicylate every seventh day. Doses of from gr. 1 to gr. 2. May, no treatment. June, July and August, intramuscular injection of mercury salicylate every seventh day. Doses of from gr. 1 to gr. 2. September caedylate of sodium, intramuscular injections every other day. Potassium iodid internally during the last three months of mercury injections. November 1st, 1914, Wassermann —.

Patient married about the middle of No-

vember against advice. Refused any further treatment. Has never infected his wife. January 15, 1915, Wassermann —.

Summary of treatment. Intravenous salvarsan, four injections; intramuscular mercury salicylate, thirty injections of gr. 1 to gr. 2; intramuscular sodium caedylate, fifteen injections of gr. 5. Duration of treatment, ten months.

Case No. 2. Mr. B. S., white, age 30 years weight 175 pounds, single. Presented for treatment February 1914, for sore on penis which he had for four weeks.

Examination. Chancre, slight double inguinal adenitis, beginning general macular eruption on body, no lesions in mouth. Scrapings from chancre showed spirochaeta pallida. Wassermann +.

Diagnosis. Primary and secondary syphilis.

Treatment. February, 1914, excision of chancre, intravenous salvarsan, every two weeks for four injections. April, May and June intramuscular injection of mercury salicylate every seventh day. Doses of from gr. 1 to gr. 2. At the end of this time the patient declared himself well and refused any further treatment. Had no symptoms after the first salvarsan. Lost twenty pounds during treatment.

Wassermann, three months after all treatment had been discontinued, —.

Summary. Intravenous salvarsan, four injections, intramuscular mercury salicylate, twelve injections of gr. 1 to gr. 2 1-2. Duration of treatment, five months.

Case No. 3. Mr. C. G., white, age 36, weight 180 pounds, single. Presented for treatment October, 1913, for large ulcer on back of left hand, extending on to forearm.

History. Chancre on penis fourteen years ago. Secondary eruption following. Was treated for about six months. Had no further symptoms until four years ago, when ulcer on back of hand developed. The ulcer was treated locally by various physicians in Louisville for four years with an increase in the size of ulcer and no results. The last eight months of the four years treatment he received, he was treated by one of our skin specialists who diagnosed the ulcer as tuberculosis of the skin of the hand. He used various caustics on the ulcer in an effort to destroy the tubercular tissue. The hand steadily getting in worse condition.

Examination. October, 1913. Large post-ular ulcer, portions were warty in appearance, edges of ulcer much indurated, extended from base of fingers about four inches on to forearm.

Wassermann, ++.

*Read before the Jefferson County Medical Society.

Diagnosis. Tertiary syphilis (syphilitic ulcer).

Treatment. October, 1913, intramuscular injection of mercury salicylate every seventh day. Dose grs. 1 to grs. 2 1-2.

At the end of January, 1914, ulcer was healed except for small area on hand. February and March, no treatment for syphilis. May, June and July, intramuscular injection of mercury salicylate every seventh day. Dose grs. 1 1-2 to grs. 2 1-2. Large doses of potassium iodid were given internally from grs. 15 to drachm 1 1-2 three times a day. Local treatment to ulcer, unguent, scarlet red and a dusting powder of calomel and bismuth.

At the end of July the ulcer was entirely healed with a firm scar resulting. Have not been able to get the patient to have another Wassermann made.

February 1, 1915, hand and man in splendid condition with no apparent evidence of syphilis.

Summary of treatment. Intravenous salvarsan, one injection. Intramuscular mercury salicylate, thirty injections of grs. 1 to grs. 2 1-2. Potassium iodid, no record of amount given. Duration of treatment, nine months with intervals of rest.

Case No. 4. Mrs. T. G., white, age 26, weight 115 lbs., married. Referred to me for treatment, September, 1913.

History. Chancre on lip six years ago. Secondary eruption on body and mucous patches in mouth following. Had received treatment at intervals for six years with protoiodid of mercury, potassium iodid.

Examination. Large tertiary syphilides on body, legs and face, mucous patches in mouth, fissured tongue, general glandular enlargement. Three months pregnant.

Wassermann, ++++.

Patient begged for an abortion as she did not want to give birth to a syphilitic child. Husband has never contracted syphilis.

Diagnosis. Tertiary syphilis and pregnancy.

Treatment. September, 1913, intravenous salvarsan. October, intravenous salvarsan. October, November and December, intramuscular injection of mercury salicylate every seventh day. Dose of from grs. 1 to grs. 2. January, 1914, intravenous salvarsan. February, intramuscular injection of mercury salicylate every seventh day, dose grs. 2. Potassium iodid, grs. 20 to 21 given during the administration of mercury. March, 1914, patient was delivered of a four pound baby, which was apparently normal and well formed, but small. One-half of the placenta had undergone degeneration and was necrotic while the other half was perfectly normal.

At the end of the third month of treatment, December, 1913, the patient had gained 30 pounds. She remained about this weight until delivered. September, 1914, six months after delivery of child, Wassermann from the woman +—. Wassermann from the child —. The child at this time normal, perfectly healthy and well developed.

Woman has had no symptoms of syphilis since the treatment was discontinued and weighs 150 pounds.

Summary of treatment. Intravenous salvarsan, three injections. Intramuscular mercury salicylate, twenty-two injections of grs. 1 to grs. 2. Potassium iodid internally, no record of amount given. Duration of treatment, six months.

Case No. 5. Mrs. G. S., white, age 35 years, weight 180 pounds, single. Presented for treatment October, 1912, for syphilis which he had for fourteen years.

History. Chancre on penis fourteen years ago, followed by a violent pustular eruption on body, severe sore throat and mucous patches in the mouth. Has been treated at intervals for fourteen years with protoiodid of mercury, injections, potassium iodid, etc.

Examination. Large tertiary syphilides on body. Severe iritis in left eye, slight keratitis. Much congested and ulcerated mouth and throat, fissured tongue. General glandular enlargement. No Wasserman.

Diagnosis. Tertiary syphilis.

Treatment. October, November, December, 1912, January, 1913, intramuscular injection of mercury salicylate every seventh day. Doses of from gr. 1 to grs. 2. Iritis and keratitis entirely well at end of tenth injection. Syphilides entirely disappeared. February, no treatment. End of February, violent relapse of all symptoms except iritis and keratitis. (Contracted gonorrhea.) March 1st, intravenous salvarsan. All symptoms cleared at the end of two weeks. April, May, June, July and August, intramuscular injection of mercury salicylate every seventh day. Doses of from grs. 1 1-2 to grs. 2 1-2. September, no treatment. October, November, December intramuscular injection of mercury salicylate every seventh day. Doses from grs. 1 1-2 to grs. 2 1-2. January 15, 1914, intravenous salvarsan. February and March, injections of unguentum hydrarg. 30 to 60 grs. daily for two weeks in each month. April, no treatment. May, intramuscular injection of mercury salicylate every seventh day. Dose grs. 2. July, no treatment. August, intravenous salvarsan. September, intravenous salvarsan. Potassium iodid in doses of from grs. 15 to 22, three times a day was given at intervals during the mercury injections. Had much difficulty in controlling the skin lesions which

would entirely clear up and in the midst of treatment relapse violently. Patient has had no symptoms since the third salvarsan in August, 1914.

Wassermann Februtry 1, 1914, +.

No symptoms at present.

Summary of treatment. Intravenous salvarsan, four injections. Intramuscular mercury salicylate, fifty-five injections of gr. 1 to grs. 2 1-2. Inunctions, twenty-four. Potassium iodid, no record of amount given. Duration of treatment, two years, with intervals of rest.

Case No. 6. Mr. C. McS., white, age 36 years, weight 150 pounds, single. Presented for treatment September, 1913.

History. Chanere and secondary eruption ten years ago. Treated at intervals for ten years with mercury and the iodids.

Examination. Body, no eruptions; mouth, clear; general glandular enlargement, marked anaemia. Slight oedema of the lower extremities. Difficult respiration on exertion. Chest — heart, marked mitral regurgitation. Hypertrophy. Blood pressure 170. Intermittant pulse.

Wassermann, +++.

Urine. Albumen present, no casts.

Diagnosis. Tertiary syphilis with valvular involvement of the heart.

Treatment. September, 1913, intravenous salvarsan every two weeks for three injections, one-half of regular dose. November, December and January, 1914, inunctions of unguent hydrarg. grs. 30 to 21 every day for two weeks with two weeks interval between series of inunctions. Marked improvement in symptoms at this time. February, 1914, intravenous salvarsan, two injections. Full dose. March, no treatment. April, May and June, intramuscular injection of mercury salicylate every seventh day. Dose gr. 1 to grs. 2. July and August, no treatment. Potassium iodid given internally during administration of mercury and before Wassermann. End of August, blood taken. Half of blood sent to one serologist. Wassermann +. The other half of the blood sent to another serologist the same day, Wassermann +—. Has had no further treatment and is very much improved, gaining 18 pounds.

Summary of treatment. Intravenous salvarsan, three injections of three grains each, two injections of six grains each. Inunctions, forty-two of from grs. 30 to 21. Intramuscular mercury salicylate, fourteen injections. Potassium iodid, no record of amount given. Duration of treatment, one year. Very great improvement in the condition of the heart and in the anemia.

Case No. 7. Mr. C. W., white, age 34

years, weight 150 pounds, single. Referred for treatment, July, 1913.

History. Chanere on penis seven years ago. Pustular eruption on body following, mucous patches in mouth, severe sore throat. Was treated for three months with protoiodid of mercury.

Had no further treatment until the following spring, when the mucous patches returned in the month. Has been treated more or less ever since, for a syphilis that would relapse with severe symptoms, attacking various parts of the body.

Examination. Large ulcer on leg, glandular enlargement, general necrosis and perforation of bone in roof of mouth, with opening into nasal cavity. Fissured tongue, soft palate gone, necrosed area in tibia at right of ulcer. Wassermann, ++++.

Diagnosis. Tertiary syphilis.

Treatment. July, August and September, 1913, intramuscular injection of salicylate of mercury every seven days. Dose of from gr. 1 to grs. 2. October, no treatment for two weeks. November and December, intramuscular injection of mercury salicylate every seven days. Dose of from gr. 1 1-2 to gr. 2. January, 1914, intravenous salvarsan. No treatment for six weeks. March, April and May, intramuscular injection of salicylate of mercury every seven days. Dose of from gr. 1 to grs. 2. June and July, no treatment. August, intravenous salvarsan. September and October, intramuscular injection of mercury salicylate every seven days. Dose, grs. 2. November, December and January, 1915, no treatment. Wassermann, end of January, 1915, +. Potassium iodid internally in doses of from gr. 20 to 21, three times a day during administration of mercury and before Wassermann. Locally to ulcers, unguent, hydrarg. ammon. and a dusting powder of bismuth and starch. Nitrate of silver, 20 per cent. used in mouth. Patient gained thirty pounds in one and one-half years of treatment. Ulcers were entirely healed and the destruction of bone arrested.

Summary of treatment. Intravenous salvarsan, three injections. Intramuscular mercury salicylate, forty injections. Potassium iodid, no record of amount given. Duration of treatment, one and one-half years.

Case No. 8. Mr. F. S. C., white, age 37 years, weight 140 pounds. Presented for treatment October, 1913.

History. Gonorrhea ten years ago, contracted syphilis seven years ago for which he was under active treatment for four years. The syphilis was of a severe type. In January, 1913, he noticed he was getting extremely nervous, then the soles of his feet became numb, also the ends of his fingers were slight-

ly numb. This was followed by a stiffness of his legs and thighs. In March 1913, he noticed a marked unsteadiness in his gait, was unable to walk in the dark without falling. He at that time consulted his physician, who made a diagnosis of locomotor ataxia. He was put on mercury, chiefly inunctions, which he continued until I saw him, with a rapid increase in all clinical symptoms.

Examined October, 1913, loss of knee jerk; ankle tendon reflex lost; loss of sexual power; well marked ataxia; unable to walk without aid of cane; great difficulty in arising after sitting down; slight hypotaxia; tottered with eyes closed; girdle symptom marked.

Vision in right eye 20-20+. Vision in left eye 20-20-. Pupils, right eye slightly larger than normal; left eye about normal. Both react to light slightly. Disc, whitened more in right eye than left.

Blood Wassermann, +.

Diagnosis, *Tabes dorsalis*.

Treatment. October, 1913, intravenous salvarsan. October, November and December, intramuscular injections of mercury salicylate every seventh day. Doses of from gr. 1 to grs. 1 1-2.

Beginning January 10, 1914. Intravenous salvarsan, seven injections. Intraspinous salvarsanized blood serum, seven injections, at intervals of two weeks were given. Cerebro-spinal fluid before intraspinal was as follows:

Wassermann Noguchi ++, globulins, ++. Pleocytosis 72 cells. Cerebro-spinal fluid after seventh intraspinal, Wassermann Noguchi —, globulins normal, pleocytes 5 cells. Patient lost about ten pounds during treatment, but was much improved as to the *Tabes* symptoms January, 1915. Patient is working as traveling salesman, and only occasionally has to use his cane. His ataxia symptoms have not progressed in past year.

Summary of treatment. Intravenous salvarsan, nine injections. Intraspinous salvarsanized blood serum, seven injections. Intramuscular mercury salicylate, ten injections. Potassium iodid, no record of amount given. Wassermann and all counts were done by Dr. Baldauf.

Case No. 9. Mr. G. S., white, age 32 years, weight 160 pounds, married. Referred for treatment February, 1914.

History. Syphilis twelve years ago. Was treated for six months with mercury and the iodides. For the past four months has been having epileptic attacks, which have been becoming more frequent. At present has from three to five attacks daily. These attacks were the typical epileptic seizures with total unconsciousness. Has noticed unsteadiness in

walking recently. Complains of numbness in left side of face and left arm. Fingers and toes numb at times. Severe headaches, lightning pains, girdle symptom.

Examination. Body in good physical condition, slightly exaggerated patella tendon reflexes. Slight unsteadiness in gait. Eyes, both pupils react to light. Diagnosis, Cerebro-spinal syphilis. Probably gumma of the brain, beginning *tabes dorsalis*.

Treatment. February, 1914, intravenous salvarsan, six injections. Intraspinous salvarsanized blood serum, six injections with intervals of ten days between injections. Before treatment, Wassermann Noguchi, ++, cerebro-spinal fluid ++++ Pleocytosis 176 cells. Globulins, much increased.

After sixth salvarsanized serum intraspinal Wassermann Noguchi, blood —. Wassermann Noguchi, cerebro-spinal fluid —. Cell count, seven cells. Globulins, normal. Wassermann and cell count were done by Dr. J. D. Allen.

After the first intraspinal treatment patient had no epileptic attacks and has had none since. The *tabes* symptoms seem to have been arrested. Patient was referred back to his physician after the spinal injections, who has kept him on mercury and the iodides.

Series of ten cases of primary syphilis, diagnosed, chancre, before appearance of the secondary eruption. *Spirochaeta pallida* found in six. Wassermann — in eight, + in two. Treatment for one year. Twenty to thirty intramuscular injections of mercury salicylate. Inunctions varied. Potassium iodid during last six months of treatment. Wassermann at the end of fourteenth month — in seven cases, and + in two cases, and +++ in one case.

Series of five cases of secondary syphilis. (chancre and first eruption). Wassermann + to ++++. Treatment for eighteen months. Cases received from three to six intravenous injections of salvarsan. Thirty to fifty intramuscular injections of mercury salicylate. Inunctions varied. Potassium iodid during last twelve months. Wassermann — in three cases, and + in two cases.

Series of ten cases of tertiary syphilis, (no involvement of central nervous system. Duration of disease 3 years or more. Wassermann + to ++++. Treatment from eighteen months to two years. Cases received from three to eight intravenous injections of salvarsan. Thirty to sixty, intramuscular injections of mercury salicylate. Potassium iodid during most of treatment. Wassermann at the end of the twentieth month, — in one case +— in two cases, + in five cases,

++++ in two cases, two of which were — at the end of the twenty-sixth month.

Series of ten cases of cerebro-spinal syphilis, all tabes dorsalis. Duration of syphilis from six to twenty years. Wassermann on blood of three cases —. Wassermann on blood of seven cases was from + to +++++. Wasserman on cerebro-spinal fluid from ++ to +++++. Pleocytosis from 72 to 242. Globulins increased in all. Treatment from two to ten months. Cases received from three to eight intravenous injections of salvarsan. Three to eight intraspinal injections of salvarsanized blood serum. From six to twenty-eight intramuscular injections of mercury salicylate. Large doses of potassium iodid. After treatment, Wassermann blood of four cases —. Wassermann blood of six cases, from —+ to +++. Wassermann cerebro-spinal fluid, three cases, —. Wassermann cerebro-spinal fluid two cases, +—. Wassermann cerebro-spinal fluid five cases, +. Pleocytosis from six to eighteen. Globulins about normal in all.

The methods used during the past three years in most cases treated with quite gratifying results to both myself and patients, have been incorporated in the foregoing case reports. I wish to call attention to a few points that have been of service to me.

First. In primary syphilis where a diagnosis of a chancre has been made by the finding of the spirochaeta pallida and before any secondary symptoms have developed and while the patient still has a negative Wassermann, I strongly advocate the excision of the chancre, if same is on soft parts and can be removed without too much tissue destruction, and the immediate administration of salvarsan intravenously, repeated at two week intervals, for at least three injections. This should be followed by a thorough course of mercury, later combined with the iodides, which I believe should be kept up persistently for at least eighteen months with very brief intervals of rest. At the end of this time, if no symptoms are present, I think it safe to take the patient off treatment for two or three months, and prepare him for a Wassermann. These cases will generally be found negative at this time.

Second. In secondary syphilis, where the chancre and secondaries are present, local treatment of the chancre must be resorted to, as it is then too late for excision. At least three injections of salvarsan should be administered as in the primary case, but the mercury and iodides should be kept up for a period of two years before a Wassermann is made. Salvarsan may be given at intervals during mer-

cury treatment, especially if anemia develops.

Third. In tertiary syphilis, where no cerebro-spinal involvement exists, I believe it better to give a thorough course of mercury first, three or four months, unless there is some special symptom that demands immediate correction, such as perforating ulcers, etc., then a course of salvarsan. Mercury and large doses of the iodides should be given for at least two years before having a Wassermann made. It has been my experience that tertiary syphilis with its various manifestations do far better on mercury and the iodides and I believe we should insist more on a thorough and persistent course over a number of years and not be misled by the rapid disappearance of the symptoms after the administration of salvarsan.

Fourth. In cerebro-spinal syphilis, salvarsan is again resorted to as the only agent with which any definite results can be obtained. Salvarsanized blood serum directly into the cerebro-spinal canal by means of the lumbar puncture being the only available means of treating syphilis attacking the central nervous system. But after the cerebro-spinal fluid is rendered negative by this means, mercury and iodides should be given, as I believe this locality can be reinfected by a syphilis active in other parts of the body, treatment being prolonged over a considerable length of time.

Of the various forms of syphilis, the macular seems to respond easier and more promptly than any, the papular variety next, then the pustular.

I feel fully convinced that salvarsan and neo-salvarsan alone will not cure syphilis, and should be followed or preceded by mercury over a period of several years. As to salvarsan and neo-salvarsan, I consider salvarsan far superior and have entirely discontinued the use of neo-salvarsan, except in an occasional case where I prefer to administer the drug intramuscularly. In the administration of mercury, the best results have been obtained by the intramuscular injection of the insoluble salts, which unquestionably hold first place, the salicylate of mercury being generally used. This I have put up in a 40 per cent. suspension in cocoa butter, three drops of which represent approximately one grain of mercury salicylate. This admits of quite a large dose being administered intramuscularly, without causing pain. Indurated areas or knots do not develop at the sight of the injection. A tuberculin syringe is used, because of the necessity of accuracy in measuring the drops. Mercury by inunction holds second place in efficiency, while mercury by

the mouth is the least effective form of administration.

In closing, I wish to say that while I consider the Wassermann test of very great value, I must emphasize this one point, that you cannot put absolute confidence in a negative Wassermann, as I have had several cases where active evidence of syphilis existed and the blood report returned gave negative. Often in cerebro-spinal syphilis the cerebro-spinal fluid may be + + + +, and the blood negative. Again where the patient has been off treatment for months, and the iodides given before a Wassermann, the blood report may be negative, but if a provocative dose of salvarsan be given and a Wassermann made, the report may be returned ++ or + + +. Also different serologists may report from a negative to several plus on blood taken at the same time and run through the same day.

DISCUSSION.

Curran Pope: I do not believe that, even with the advent of salvarsan, we can say that syphilis is surable; controllable is a better word.

I am unwilling to base a diagnosis of syphilis on the Wassermann test; if positive, we are perhaps justified in saying that the individual has had syphilis, but there must be some corroborative clinical symptoms of the disease before we can say that it is active.

Time is an important element in the treatment of syphilis. I am still of the opinion that treatment over a period of from three to five years is required before we can say that the disease has been controlled, notwithstanding that the essayist, inferentially, at least, reduces this to eighteen months by the use of salvarsan.

A word in regard to the treatment of nerve syphilis. The introduction of the Swift and Ellis method of treatment has certainly caused the general practitioner to be alive to the necessity of the early diagnosis of tabes, paresis and cerebro-spinal lues. I am inclined to believe that in nerve syphilis we have to contend with a form of the spirochete which has a predilection for the central nervous system. It has been my observation that mild cases of syphilis, in which the mucous membranes and skin are not involved, is more liable to attack the nervous system.

The essayist did not draw a sharp line of distinction between paresis, tabes and cerebro-spinal lues. Paresis is absolutely inaccessible to therapeutic measures at our command; therefore, we can hope for very little improvement in these cases. The treatment I have found to give the best results in paresis is to produce a hyperleucocytosis by the administration of old tuberculin, which will very often bring about improvement which cannot be obtained by any other means.

Tabes is primarily a parenchymatous degenerative process, independent of vascular conditions, and once the nerve tissue has been destroyed, no method of treatment will replace it. In these cases remissions, irrespective of treatment, are frequent. Cerebrospinal lues, unlike paresis, is accessible to therapeutic measures, and will very often yield to either mercury or salvarsan treatment. Therefore, to my mind, the Swift and Ellis method is not indicated in the latter condition. In tabes the Swift and Ellis method may relieve the pains, although I have seen cases in which the pain was worse following this treatment than before. With one exception, I have not seen any decided improvement following the intraspinal method. In this condition it is just as important to build up the patient's general health as it is to administer antisyphilitic drugs. I have seen them improve markedly following electric light baths and hydrotherapy in the shape of cold baths. By this means the circulation is improved, the appetite increased, and better digestion, assimilation and elimination produced. Rest and proper nutrition are essential factors in the treatment of any form of nerve syphilis. In ataxia very little can be hoped for except such improvement as is brought about by re-education exercises.

The method of Swift and Ellis is still in its experimental stage, but it has stimulated the profession to a study of these conditions and we can only hope that in time it will prove to be all that has been claimed for it.

Henry J. Farbach: We have learned in the past five years that syphilis cannot be successfully diagnosed or treated without laboratory aid. Syphilis is primarily a local disease, and if we can diagnose it in this stage and treat it by excision of the chancre followed by the administration of salvarsan intravenously, we will not have to deal with it later on in a constitutional form. After the disease has become constitutional, salvarsan and neosalvarsan must be regarded simply as adjuncts to mercurial treatment. I question the value of the iodides in syphilis. In tertiary syphilis they appear to be of benefit, but I am inclined to believe that it is due to the general alterative effect of the iodides.

I do not agree with the essayist in regard to waiting eighteen months before making a Wassermann test. We should make a test every six months and if it is negative it means that our treatment even though it may have controlled the objective symptoms, is not properly combatting the infection.

One thing most of us forget in the treatment of syphilis is the fact that the virus itself is a red-blood cell destroyer, and that mercury and arsenic also interfere with the function of the blood-forming organs. Therefore, general tonics are as essential as mercury and arsenic.

As to nerve cases, most of my patients have shown improvement under the intraspinal treatment, although pathologists tell us that, in these cases, the spirochete is buried in the brain cortex, surrounded by an exudative process which renders it inaccessible to therapeutic measures. In some cases of locomotor ataxia I have obtained almost marvelous results, some of these patients being able to resume their occupations. In the face of these facts, we cannot disregard the Swift and Ellis method of treatment; when properly carried out it can do no harm and may result in marked benefit.

Bernard J. O'Connor: So many physicians fail to impress upon their syphilitic patients the necessity of long continued treatment, which is very important in the prevention of the distressing sequelae with which we are all familiar.

If there are two words in medical nomenclature that should be changed, they are "chancre" and "chaneroid." The similarity between these names is very confusing to the average patient. It has been my observation, in clinic work, that not one patient out of a hundred knows whether he has had syphilis, or some simple sore. In my opinion, when we are called upon to treat a case of syphilis, it should be impressed upon the patient that treatment should be continued for a period of at least three years.

I have had no experience with salvarsan or neosalvarsan. I would like for the essayist in closing to say whether or not the administration of these agents has brought about an increase in the number of cases of nerve syphilis, as is claimed by some authorities.

C. H. Harris: I believe that an individual, once having contracted syphilis, is never afterwards wholly free from the disease; sooner or later it will manifest itself in some form or other. We cannot say positively that a man has been cured after three years of treatment, or that he is ever cured. When it attacks the nervous system I do not believe that any therapeutic measure we have at our command is of any avail. In *tabes dorsalis*, withdrawal of the spinal fluid may, by relieving the pressure, ameliorate the symptoms.

I do not believe excision of the chancre does any good. The period of incubation in syphilis is one month, which would seem to be ample time for the system to become inoculated with the spirochete; the damage is already done and its extent depends largely upon the virulence of the disease.

Jethra Hancock: Those of us who have practiced medicine for a number of years can realize how utterly improbable it is that we have ever cured a case of syphilis. In many cases this has undoubtedly been due to the fact that we have failed to impress our patients with the necessity for continuing treatment a sufficient length of

time. I am sure that the Wassermann reaction is a very valuable aid in the diagnosis of syphilis, and where we have a general sore, with a positive Wassermann, we can tell that patient definitely that he has syphilis. Of course, there are exceptions, but in the majority of cases we are justified in going ahead with anti-syphilitic treatment. I believe that, within the next few years, it will be demonstrated that syphilis, diagnosed in its early stages and properly treated, is curable.

Jno. K. Freeman: I would like for the essayist in closing to tell us his opinion of the value of iodides in the treatment of syphilis.

W. C. Dugan: I would like some information in regard to one point; that is, whether it is the mild cases of syphilis, with little or no eruption, that develop into tertiary nerve lesions? My own opinion is that nerve syphilis is most frequently due to the fact that treatment was not properly carried out for a sufficient length of time and the disease later manifests itself in this particular form.

C. W. Jefferson, (Closing): The reason I wait eighteen months before making a Wassermann test is that I believe it is unwise to take the patient off of treatment during this period a sufficient length of time to make a Wassermann test to see whether it is plus or negative. In doing this we simply lose three months of the most important period for treatment.

I did not mean to intimate in my paper that salvarsanized serum will cure locomotor ataxia. The idea I meant to convey is that it arrests the condition in the stage in which it is at the time the treatment is given, and this I believe it does in the majority of cases when properly administered.

As to the distinction between the terms "chancre" and "chaneroid", that is a very good point. I do not believe any one can tell from looking at a sore on the penis, whether it is a chancre or a chaneroid; it takes the microscope and a Wassermann test to clear it up.

I do not agree with Dr. Harris that, once an individual has contracted syphilis, he is never afterwards wholly free from the disease. Many men have had syphilis and have afterwards married and had healthy children, and lived out their lives without any further manifestations of the disease.

As to excision of the chancre, I believe that by this means we get rid of the focus of infection before it has invaded the general system, if we do it in time.

Answering Dr. Dugan's question, I believe that most cases of cerebro-spinal lues started with a very virulent attack of syphilis. It may be, however, that some particular strain of the spirochete is responsible for this form of the disease. Answering Dr. Freeman, I believe that the

iodides are unquestionably of value in the treatment of syphilis, particularly in the later stages, after the first few months have elapsed.

CASE OF BACILLUS AEROGENES CAPSULATUS INFECTION, WITH RECOVERY.

(PRESENTATION OF PATIENT.)

By GEORGE H. DAY, Louisville.

I wish to present to-night, Mr. C. D., age 17, clerk, first seen September 1, 1914, at which time he gave this history. One month ago noticed quite an enlargement in the right inguinal region, increasing slowly in size. Noticed also about the same time that the right testicle began to swell. There was some little inconvenience in walking and considerable pain on pressure. His family history is negative, father, mother, and one sister, all living and in good health. His personal history is negative with the exception of diseases of childhood. He denies venereal infection and trauma. Therefore, aside from measles and chicken-pox his personal and family history is negative. Neither does he remember of ever having undergone an injury. Physical examination disclosed a well nourished rather over-developed young man, in apparent perfect health, weighing 145 pounds. The organs of the chest and abdomen were negative. There was considerable enlargement in the right inguinal region, involving both the superficial and deeper glands. There was no fluctuation. There was considerable fluid in the right scrotum. The head of the epididymus was thickened and nodular. The testicle proper was negative. There was also some involvement of the glands in the axilla on the corresponding side. All other lymphatics were normal. Pain was only to be found in the inguinal region of the affected side by deep pressure. A Wassermann-Noguchi was negative. A tentative diagnosis of lymphoblastoma was made and was sent in to the hospital for operation.

Operation revealed a tumor mass involving all of the superficial and deep lymphatics in the right inguinal region. The glands were separate and distinctly involved and deeply hemorrhagic, having every appearance of a hypertrophied prostate both macroscopically and in enucleation by the finger. No broken down glands were found nor any caseous deposits noted. Pathologists report, (Dr. J. D. Allen), macroscopically the tumor was about the size of a lemon, firm, with a hemorrhagic appearance. Cross section showed a hemorrhagic condition with a central ne-

crosis. Microscopical section showed the tumor to be lymph glands with pronounced round cell infiltration. The blood vessels were congested with an extravasation of blood. Some areas showed necrosis. Stained smears were negative. Guinea-pig inoculated subcutaneously with some of the tissue died in twenty-four hours, showing a general subcutaneous emphysema. *Bacillus aerogenes capsulatus* was isolated from the point of inoculation, also from the blood of the pig. Partial anaerobic 48-hour cultures from the tissue showed the *bacillus aerogenes capsulatus*. Aerobic cultures were negative.

This case before operation was apparently a typical lymphoblastoma, there being no history of trauma, venereal infection, or any other infectious condition; syphilis and tuberculosis were also excluded. Notwithstanding the clinical facts, operation disclosed an acute infectious condition as outlined by the pathological examination. The question remains that entrance to the body of the *bacillus aerogenes capsulatus* must be established. It has been shown that this bacillus is found in the intestinal tract in health, and Flexner in his studies of this infection found that there was evidence of the distribution of the bacillus within the body during life but that he was reluctant to admit of a general invasion of the blood and tissues before death as the maintenance of life for any length of time after the organism established itself in the blood and produced gas was probably impossible. Welsh and Nuttall, who first isolated this bacillus, called attention that the *bacillus aerogenes capsulatus* was obtained in blood culture during life and since the discovery of this organism there seems to have been no doubt but that it invaded the general blood stream. Gwyn recovered the organism on three different occasions from the blood of a patient, the first culture being obtained thirteen days before death. Cole obtained the organism from the blood three hours before death of a man who had had both legs crushed two days previously. Rhea and Young reported two cases of infection due to *bacillus aerogenes capsulatus* following abortions, one of which gave a positive blood culture eighteen hours before death. Hewitt reported ten cases in which he obtained four positive blood cultures, but he does not state the time at which these cultures were taken in regard to time of death of the patients, all four of whom died. Baugher has recently reported four cases, all of whom recovered. Reports of most investigators up to this time tend to show that most cases end fatally. In our case so far as *bacillus aerogenes capsulatus* infection was concerned there were few cardinal

symptoms, no involvement of the gall-bladder region, no trauma, no crepitus in the tumor. He did, however, develop a severe jaundice three weeks after leaving the hospital. We recently made an attempt to obtain another gland for pathological examination, but was only able to recover a bit of connective tissue. The hydrocele promptly disappeared, there was no further involvement of the lymphatics anywhere, and aside from a few remaining glands that are felt on deep pressure in the deep abdominal region, he is clinically free from symptoms.

DISCUSSION.

C. B. Spalding: I had the pleasure of witnessing the operation in this case. It has been my experience that cases of infection of this type have all died. The doctor is to be congratulated upon the outcome of the case.

Leon K. Baldauf: My experience with bacillus aerogenes infections has not been as fortunate as Dr. Day's. Several years ago, in St. Louis, within the space of three weeks, I had the opportunity of seeing three cases of infections from gas-producing organisms. In all three cases we were able to isolate the offending organism before death, which occurred in about ten hours. Post-mortems were held in all three cases. The lesions found were typical of this condition, the tissues everywhere being enormously distended with gas, mostly hydrogen I believe. There has been some difference of opinion as to whether or not these organisms can be found in the tissues before death, but I think there is no doubt that they can.

W. O. Dugan: I have had several cases of infection from gas producing organisms, but I cannot say positively that they were of the same type as in Dr. Day's case. One case had some bacterial disease, and I saw him because of some supposed lesion of the leg, which was much swollen and tympanitic, and the man was in profound shock. The tension was relieved by free incision, the leg collapsing just like a rubber ball. This man died. Another case followed operation for the removal of a ruptured appendix, the trouble making its appearance in the upper part of the scrotum, and there was marked sloughing of the fascia. This man finally recovered.

Louis Frank: I have seen several of these cases, and in two of them the organism was isolated before death occurred. In one or two cases, death ensued without a culture having been made. Several other cases recovered.

Without meaning to criticise, I do not think the doctor has given us sufficient data in connection with this case upon which to base a positive diagnosis of bacillus aerogenes capsulatus infection. If I understand the report correctly, here was a case in which a tumor was removed

(under what aseptic precautions is not related) and preserved, and its inoculation into an animal produced death from aerogenes infection. It is my impression that the organization itself must be recovered from the inoculated animal before a positive diagnosis can be made.

George H. Day, (Closing): Dr. Allen was careful to preserve these tumors under aseptic conditions, and from the clinical symptoms, we did not expect to find a bacillus of this variety. Of course, there is room to doubt that it was a case of aerogenes bacillus infection.

COUNTRY OBSTETRICS.*

By R. N. FILIATREAN, Sorgho.

Sometime, about a year ago, your secretary invited me to prepare a paper for this society.

Up to that time, having seen a few obstetrical cases, and feeling just then that these cases had been successfully and fairly efficiently handled, it was concluded and decided that this paper might be christened "Country Obstetrics."

Now since then, having seen a few more cases, and they happening to have been a series of more complicated, tedious and wearisome things—as for example, one rigid os and rigid for God's sake too, one ruptured cervical artery, one placenta previa, one face presentation, one detached placenta, one case of eclampsia, necessitating podalic version when the os was a "son of a gun" for persistent tightness and a few other things too wearisome and harrowing to even try to call to mind, it was again concluded and decided that perhaps the supposed efficiency presumed to exist, was not really so much efficiency as it was in reality only a happy escape.

Well about the time this paper started "a bornin'" some things happened to me, you know, ancestry, pedigree, breeding, or what not, call it what you will, has a penchant for bobbing up, cropping out or showing some how in the offspring. Well sometime or other in my ancestry, (please excuse personality) I wonder if there was not a strain of gypsy.

I graduated in 1899 and located four times and took a post-graduate course, before I settled down to work in the early part of 1901, was then busy and fairly happy until 1913 when the call of the road again grew and grew until it induced me to give up some certain things, for some things which might be.

This wanderlust and I were then again going, as though in double harness. We tried several new locations, and the exciting sensation of new surroundings was exhilarating, finding out our new professional brothers was an interesting experience, and finding most

*Read before the Daviess County Medical Society.

generally, that there was already in that particular field an extra abundance of professional brothers, was only a part of the rest of the things we found out, not to mention the considerable loss of time, nor the scandalous depletion of our bankable commodities, and a feeling of permanency that seemed healthy and real did not pervade my system until last October, when I got back into the county of my first love. And now let me say, and I think I can say advisedly, I am glad I am back, I did like the people here because they are good substantial folks, better than an average, but more than all I am glad I am back because I love the profession here, yours is the best society I know of, and its members all are as white as new born Angels.

Well, I had hoped your secretary had forgotten my promise but it seems that he has something against this society for he kept right after me for this paper. So when you get that bored feeling and wonder when this paper all will end, just heap up maledictions on him and don't blame me, I tried to spare you.

The principal object in naming and writing this paper was to call attention to some of the conditions which prevail in this line of work in the country.

The one striking feature appealing to my wonder, is the almost entire lack of any kind of sanitary precautions, so much spoken of by men in authority on this subject, in so many instances, and the apparent immunity, almost always.

It does seem that there must be some extra power of resistance in these cases, or else some acquired immunity, for good results are often obtained where conditions are unfavorable.

Now understand me, please, as casting no reflections on most of the country people, for most of them do their utmost in such cases, but it is this negligent minority of whom I speak in particular. Many cases going through the entire period of gestation and the physician is not consulted at all and summoned only at the eleventh hour, frequently finding the whole thing over on his arrival—the mother placidly reposing on a downy couch of dirt and filth and the baby swathed in some old unwashed, cast off garment. It in these cases which seem to escape infection so well, but it is also out of this class that I have gotten nearly all my eclampsia cases.

In some seven hundred cases of obstetrics, there have been two cases of placenta previa, both marginal, both babies still-born, both woman lived. Three post-partum hemorrhages, one coming on two hours after labor, one case of nervous collapse, or shock, which nearly proved fatal in a stout woman, occur-

ring just at the end of labor. Three cases of fatal septicemia, all occurring within a few weeks, pointing to some error in technique, but I absolve myself of blame, by the fact that many other cases were attended just at this period. (it was one of those baby shower periods) and all those others did well.

Two cases of fatal tuberculosis, and two cases of tuberculosis which survived. There were ten sets of twins, one case of detached placenta, caused by a fall followed by desperate hemorrhage and a most stubborn subsequent anemia—this woman in her next pregnancy had eclampsia at the eighth month, and a fatal nephritis two years later.

There were nine cases of eclampsia, two of which were post-partum, all except two were in primipara, one death, that of a multipara, there were four cases in which podalic version was done. There was one case of acrania, one case of hydrocephalus, one case of imperforate anus but the baby died in a few hours and I escaped any notoriety about the case.

Forceps were used in thirty-five cases and until recently I felt safe with the forceps on the head. Have had a good many minor tears, had two complete perineal lacerations, one with, and one without forceps. One case atelectasis in one lobe, lived to third year. three cases spina bifida—two died, one living, about twelve years old, can't walk or talk—two cases ophthalmia, one recovered with eyes good, one died—three cases secondary umbilical hemorrhage all recovered, one case supernumerary digits, three cases cleft palate with hare-lip, five cases pernicious vomiting of pregnancy—one fatal, one abortion, two cases phlegmasia alba dolens, one case continued menstruation up to eighth month, one case hysterical convulsions at the seventh month, one case marked retroflexion at eighth month, where, on attempting to replace the fundus thus relieving the rectum, the woman complained of pain, the man got his shotgun, the physician got away. Have not yet had a broken bone nor a dislocated joint.

And this I think completes my accessible data on this subject, there is one thing I'd like to find out to-day, in our system out in the sticks the "non-twilight sleep" kind, we have numerous maternal wails, moans and lamentations, sometimes very loud and noisy. I wonder if the boys in town have any kind of a hush system, some of my cases disturb the stars.

And now in conclusion I would say, this resume has caused me to look more closely than I ever had, into my obstetrical record and I was especially struck by the great number of cases attended where the remuneration had been confined so largely to thanks only.

I don't know if there is any Bible on this

subject or not, but I think I would like to establish a creed wherein it would become incumbent on each baby brought into this world, who was not paid for by his fond and loving parents, to be held responsible for this bill and all interests accruing thereon on reaching maturity—thus creating a fund due the accoucher in his senility for it is better late than never.

POST-OPERATIVE ILEUS.*

By A. H. BARKLEY, Lexington

After a careful resume of the literature on this subject one is impressed that post operative ileus is much more common than one would suppose. Its frequency is not always appreciated by the man who does a limited amount of surgery and again the views of the majority of these men regarding post-operative ileus is so conflicting and at variance with the generally accepted views on this subject that a few remarks would not be out of place. Ileus is derived from the Greek term *eilees*—to twist. A group of clinical signs produced by acute intestinal obstruction which is manifested by severe pain, great prostration and often vomiting has been designated as ileus. The term may be a very definite one since the ileum has derived its name from the Greek *eliees*—to twist—evidently ileus means to twist in some portion of the ileum, but the conditions found in a case indicating acute obstruction vary with each individual case. It will be found that an acute bowel obstruction due to a twist or knotted condition is called a *volvulus*; an obstruction caused by an adhered loop of ileum causing a kinking as *angulation*; and acute obstruction due to an acute twisting of a loop of ileum as a *torsion* of the bowel and so on to the end of the list of acute bowel obstructions. We find that to diagnose ileus gives us no accurate pathological idea of the cause for the important clinical picture, namely the acute bowel obstruction.

The term undoubtedly first came into use from an observation that the majority of acute bowel obstructions were found in the ileum and had no reference to the exact local conditions. Since the tendency to a more accurate nomenclature that states the exact findings, the term ileus is to a certain extent misleading and I am of the opinion that it should be dropped and be supplanted by the more rational but perhaps not altogether accurate one of acute bowel obstruction.

This complication is one that may follow any operation within the abdomen, it may be directly due to the result of the operative

procedure or may come on post operatively and independently and far removed from the site of the operation, this latter condition is by no means so frequent as it is one of the complications that shows up quite early in very many cases.

As regards its frequency, it is surprising to see how widely the experience of well known surgeons differ on this point. Some have seen a number of these cases while others of equally large experience have seen comparatively few, however, as first stated, it is of such frequent occurrence that its possibility should not be lost sight of after any abdominal operation.

HISTORICAL.

To Sir Spencer Wells is given the credit by Baisch for first describing this condition in a paper published in 1860. The first case he reported was one due to a knuckle of bowel becoming adherent to an ovarian stump, the second case was one where a loop of bowel had been caught in a suture while closing the abdomen. He had eleven cases of post-operative obstruction all died unoperated upon.

Schroeder was the first to operate in 1878 for this trouble losing his patient.

Olshausen about one year later was probably the first to report a case successfully operated upon.

From 1879 up to 1886 there was not much published about this complication probably due to the fact that the pathology was not clearly understood and the results discouraging.

Rohe, of Baltimore, in 1894 was the first in this country to call attention to this complication in his address before the American Association of Obstetricians and Gynecologists which met in Toronto.

In 1899 Shade had 112 cases all following operations, many of these cases followed hernia operations.

Hawkins later reported 224 cases of acute appendicitis in which ten deaths occurred, four from obstruction.

In 1899 Werth advocated enterostomy for the relief of this condition.

Schlange in 1889 was the first to offer anything like a rational classification, he divided ileus into paralytic ileus, which practically covers adynamic and dynamic ileus as the one may run into the other in the same case if the condition persists long enough, and, second, mechanical ileus.

Authors classify this condition in various ways but there is yet to be found one classification that will meet the demands of all surgeons.

Broca classes them as early and late, the early cases are hard to diagnose and fall within the wound healing period, the other class.

*Read before the Fayette County Medical Society.

or late cases, are easier because the element of infection has been eliminated as the cases occur after the wound has healed.

Mikulicz classes them according to the causation as mechanical and dynamic.

Murphy classifies as follows, adynamic, dynamic and mechanical ileus. Under the first or adynamic he places all cases where there is absence or loss of power of propulsion. Under the second, or dynamic, he includes those cases due to excess of power, i.e., excessive peristaltic movement or contraction of the muscular coat of the bowel. Under the last named classification, mechanical ileus he includes all cases where the onward movement of the intestinal contents is impeded due to a mechanical condition.

Under the head of dynamic ileus we have a condition of total absence of normal peristalsis due to a paralysis of the intestine, parietic or spasmodically stenosed according to Cannon and Murphy.

From the experiments conducted by Cannon and Murphy one would conclude that a cessation of peristalsis is due to inhibitory impulses through the splanchnic nerves as during operative procedures, injuries to the mesenteric plexus or traumatism to the intestinal muscular structures. It would appear that that dynamic ileus may be due either to a disturbance of the central nervous system or it may be local in a defect in Auerbach's plexus or in the structures which that plexus controls.

General asthenia may sometimes be responsible for a total cessation of the motor activity of the digestive organs. Nothnagle reports a case resulting from inflammation of an undescended testicle. Operations for piles and suppurations in the abdominal regions have produced symptoms of occlusion of the intestine. Some have seen fit to take issue with these views, namely, Kocher, however Cannon and Murphy, who have done much along this line and have demonstrated experimentally that reflex dynamic ileus does exist. So much for dynamic ileus, a condition that concerns all practical surgeons and one that must not be lost sight of in post-operative conditions that confront us not infrequently. Our efforts should lie in the direction of prophylaxis for it is not difficult to see that reflex ileus both of central and local origin, is difficult to manage successfully. This condition is usually brought about by peritonitis, traumatism, sepsis, reflex irritation, spinal lesions, etc.

In mechanical ileus we are confronted with mechanical conditions where the intestinal obstruction is due to some physical interference with the fecal current. Not many years ago it was of common occurrence to diagnose

an acute appendix as ileus, but later the fallacy of such an opinion was shown as it was very seldom that diagnoses as were then made were verified by *sectio in vivo* or *sectio post mortem*.

Clinically speaking, it is at times impossible to make a distinction in all cases between the various forms of ileus as they may all be present in the same case. For a general working rule it is well to remember that several factors are at work in producing this trouble, thus mechanical and sepsis. From the stand point of treatment it is desirable to distinguish these forms as the treatment of the mechanical variety gives better results than in the septic form.

It is well to state here that when a case presents itself it is not only unwise but unsafe to delay surgical intervention until the diagnosis of the precise form can be made as all cases of total obstruction following operation demands prompt relief.

Probably the most potent cause of post-operative obstruction is directly due to inflammation either septic or otherwise and occurs early, while from old adhesions which have existed in the shape of bands and remained quiescent for a long period of time occur at a more remote period following the operative procedure.

It has never been satisfactorily explained just why peritoneal inflammation should cause obstruction, but it is a fact that a certain number of cases have obstruction during the course of or as the result of peritonitis; explanations have been offered that it is probably due to vasomotor disturbance of the intestines or to oedema or to the inhibitory nerve supply of the intestines due to toxins acting reflexly.

Some of the exact conditions found at the time of operation may be enumerated below, of course there are many, but a few of the most important will suffice for our purpose.

BANDS AND ADHESIONS.

Adhesions. Adhesions may be between the coils of intestines themselves or to a raw surface on the abdominal wall, or to one of the abdominal viscera, or to a stump of an appendix or ovary, or a knuckle of intestine may be caught in the adhesions of an inflammatory or septic mass.

Bands. Bands may be the result of new inflammation or some remote trouble, or the omentum may become rolled up into a band and incorporate a loop of intestine. Bands are usually the result of inflammation as the inflammatory exudate usually lengthens thus causing a band to form, this is seen in cases where the uterus has been suspended to the wall of the abdomen which, by the way, has

caused obstruction by the bowel becoming entangled with this ligament.

- (2). Volvulus or twists.
- (3). Inflammatory mass.
- (4). Thrombosis.
- (5). Intestinal paresis following traumatism during operation.
- (6). Kinks.
- (7). Cicatricial stenosis.

Of all the causes enumerated above adhesions and bands may be said to be the most frequent causes. Kinks and inflammatory conditions also contribute their quota in the production of this trouble. Peck in the *Annals of Surgery*, says kinks often cause obstruction which may later be relieved by position, enemas and massage, some, however, are of sufficient severity to demand operation.

It can thus be seen from what has been said that it is very necessary to have a clear conception of the condition in a given case, when circumstances permit us we should have a clear idea of the pathology, and if possible to determine the exact location within the cavity of the obstruction and just what portion of the bowel is involved, this is of course not always easy, for, as a rule, by the time the surgeon has been called he not only has to deal with a case where an acute inflammation is present but, in all probability, it has become septic the very nature of which renders not only the diagnosis of the pathologic condition as well as the exact portion of the intestinal tract involved, well nigh impossible as well as making the technique doubly difficult and the ultimate outcome of the case very uncertain.

The incision usually reveals a mass of adhesions which not infrequently holds pus within their grasp, if pus is not present the bowel is in a very oedematous condition to say the least, and ill-calculated to get good results, it matters not what method of operative procedure is instituted.

In considering the symptomatology of post-operative ileus, we may, for convenience, divide the cases into mechanical and septic. In the mechanical variety it may be understood to mean those cases coming on suddenly, either immediately following an operation or at some date far removed from the operation.

It matters not what time during the post-operative period it comes on the symptoms are fairly constant in those cases due to mechanical causes, as obstinate constipation, colicky pains, abdominal distention, vomiting and shock may be considered the cardinal symptoms of ileus in the early stages. If the patients live long enough we have added to these symptoms those of peritonitis, in fact, if any case of post-operative ileus progresses

far enough the symptoms of peritonitis will surely supervene.

The pain may be colicky and is usually intermittent or it may be that the patient will feel as though a band was drawn tightly across the abdomen. The writer saw a case in an adult male that insisted there was something drawn tight inside his abdomen, an operation six hours later revealed the fact that the patient was correct, as a band four inches long was holding down tightly a portion of the jejunum, which was promptly released and patient did nicely.

Vomiting may not be present at the beginning, especially if the point of obstruction is low down, but when it is higher up it is one of the first and most persistent symptoms.

The distention and tenderness is sometimes localized at first, but the distention becomes general and the tenderness not only increases in severity but soon becomes diffuse.

The obstinate constipation seen in these cases is very marked; and usually becomes more so as the case progresses.

In those cases that have a septic origin the symptoms do not differ so much in kind but vary as to their intensity, as a rule in this class of cases, the symptoms come on slowly but all the while becoming more pronounced. The picture is not one of sudden onset with shock and collapse as is seen in the acute or mechanical variety.

The treatment of this unfortunate condition is, in the majority of cases, surgical, however, in those cases of partial obstruction, dorsal or knee-chest position and enemas together with hot applications may give relief, in all cases a careful watch should be kept and surgical intervention should be resorted to, when needed, without delay.

Unless fly traps are used to capture the flies as they emerge from their breeding places, such measures are ordinarily only excuses for failing to observe the more important cleaning-up process; the entrapped flies have ordinarily had ample opportunity to carry filth and germs and deposit their eggs. However, traps may be useful adjuncts to other more permanent corrective measures—the more flies captured the better—but the trapping should begin early in the spring in order to capture the early flies which are responsible for the later multiplied millions of the same species. Many good fly traps are on the market and these may be baited with milk-soaked bread, the juice of crabs, stale beer, etc.—From *Flies—Their Habits and Control*, Bulletin California State Board of Health.

RESECTION OF STOMACH FOR CALCULOUS, SADDLE ULCER OF LESSER CURVATURE.*

By IRVIN ABELL, Louisville.

A. C. H., white, male, age 41, referred by Dr. C. G. Lucas, Married, no children.

The family history is good, father living, mother dead of pneumonia, one brother and three sisters living, all in good health, one brother died in infancy.

Personal History. No record of acute or severe illness; operation for hemorrhoids in 1908. Present illness began three and one-half years before coming under observation, Nov. 22, 1915. Chief complaint has been stomach distress. First symptoms noted were fullness after eating, sour stomach and occasional vomiting, the latter occurring after the ingestion of any and all kinds of food. Periods of quiescence covering some days, with freedom from gastric distress, were noted during the first year and a half, with the attacks of sour stomach and vomiting becoming more marked with continued recurrence. At this time, two years before coming under observation and one and one half years after onset of symptoms, pain was noted, being felt in the epigastrium and at the inferior angle of the left scapula. It followed immediately upon the entrance of food into the stomach and was wholly or partly relieved by vomiting, spontaneous or induced.

During the past two years attacks of severe pain, nausea and vomiting have been disabling and have necessitated cessation of work and confinement to bed for periods varying from one to six weeks. During the past year pain, nausea and vomiting have been experienced daily. In the past three years he has lost 47 pounds in weight. He has never observed blood in the vomitus and upon but one occasion has the color and character of the stool been such as to suggest the presence of blood.

Examination. Lungs normal; heart rate 76, sounds normal. Blood pressure: systolic 128; blood shows deficiency of hemoglobin and lowered red cell count; white cells normal. Abdomen shows rigidity and tenderness in the epigastric area, tenderness being most marked below the ensiform; remainder of abdomen negative.

Test meal by Dr. Lucas shows 100 c.c. withdrawn; free acid 42; acid salts 10; combined acids 20; total acidity 70; benzidin blood test negative; erythrodextrin and maltose present. X-ray plates made following ingestion of Barium meal showed stomach normal in con-

tour, size and position; no filling defect or pyloric obstruction noted.

Urine negative except for presence of occasional pus cell and many oxalate of calcium crystals.

Diagnosis, ulcer of stomach with possible cystic duct obstruction. Operation revealed the lesser curvature of stomach, pylorus, first portion of duodenum and gall bladder held in adhesions. Separating these the gall bladder was found free of stones and emptied on pressure; the lesser curvature of the stomach, at the junction of the pyloric third with the cardiac two thirds, presented an indurated mass capped with thickened, indurated fatty tissue of the gastro-hepatic omentum; many indurated lymph glands were noted in the latter space; by infolding the stomach wall a distinct crater could be felt in the mass on the lesser curvature. The stomach was resected in its continuity, the section including all of the indurated areas with its adherent fat and glands; an end to end anastomosis was done and the wound closed. Regurgitation of foul stomach contents, blood and mucus, was noted at end of second 24 hours and relieved by lavage. Further recovery was uneventful.

Present condition, four and one-half months after operation; complete freedom from pain and gastric symptoms with rapid gain in weight.

Pathological report by Dr. Graves is as follows:

Gross Description: Specimen consists of a section of stomach 4 cm. long and 9 cm. wide. At what appears to be the lesser curvature there is a distinct thickening 3 cm. in diameter and the wall feels rather firm. To the surface of stomach extending down on wall for 3 cm. on either side is attached fatty tissue resembling omentum. In lesser omentum are three ovoidal masses, largest of which is 1.5x1x.7 cm. On interior of stomach beneath the firm area at lesser curvature is an ulcer 2 cm. long, 1 cm. wide and .9 cm. deep. Edges are rounded, walls undermined and base dirty grayish red. Section through ulcer shows tissue at base grayish white and smooth.

Microscopical Description: Sections show loss of tissue in mucosa of stomach surmounting a wall much thickened with fibrous tissue and infiltrated with lymphocytes and plasma cells. Many of the arterioles show thickened walls and are surrounded by similar cells. No inciting bacteria found. No evidence of tumor. Sections of lymph nodes show sinuses and capsule infiltrated with plasma cells and lymphocytes.

Microscopical Diagnosis: Chronic gastric ulcer. Chronic lymphadenitis.

*Read before the Jefferson County Medical Society.

THE TREATMENT OF CARBUNCLE.*

By D. W. GADDIE, Hodgenville.

Accepted treatments of carbuncle are surgical, such as incision and curetting. As a curative, they are unsatisfactory and very painful.

If patient is old, a fatal termination is very probable. If young, prognosis is more favorable.

Under the treatment I am to report, severe pain is unnecessary, the knife and curette cruel and useless, fatal termination unexpected.

TREATMENT

Cover carbuncular area with cotton saturated with alcohol, to neutralize unavoidably escaped hypodermic fluid, and thereby prevent injury to healthy skin. Inject into each pustule a ninety per cent. solution of carbolic acid sufficient to whiten tissues injected. Weaker solutions are painful and dangerous. In forty-eight hours lift out the dead carbuncle. Keep wound clean. That's all. No pain from treatment, as a ninety per cent. solution of carbolic acid is a local anesthetic.

No evil results. Try it.

*Read before the Muldraugh Hill Medical Society.

CONTAGION AND HOW TO COMBAT IT.*

By J. W. CRENSHAW, Cadiz.

"Wise men desire rather to avoid disease than to take physic, and to be freed from pain, rather than to find ease by remedies."

The sentence with which I open my brief paper, is from one of the most celebrated productions in English literature; a composition that added a new word to the dictionary, and has stood through the ages for that which is chimerical and fanciful. I quote it in order to set forth the idea, that even in "Utopia," that wonderful creation of Sir Thomas Moore, the practical is not entirely eliminated. If in this paper I seemingly deal with the ideal, I hope to be able to inject enough of the practical, to compensate you for the listening. If I shall succeed in impressing those in authority with the importance of revolutionizing some of the methods of combating contagion, I shall feel amply repaid for the effort.

SMALLPOX

I first take up the most loathsome of all the contagious diseases, smallpox, and open the discussion with the bold statement, that I am opposed to the method now pursued, of relying principally on quarantine for preventing the spread of the disease. Having been placed in authority by the fiscal court of my county a few years since, in the most extensive

epidemic that the county has ever had, I placed a large section under quarantine, and served notice on all parties within the prescribed territory not to leave their homes under any circumstances, and in no event to visit the county seat without permission. I wound up the fiasco with the firm conviction that we had made a practical failure, at an immense expense to the county and the State. Having at our finger-tips a comparatively safe and certain preventive in the Jenner vaccination, I would have the health authorities rely implicitly upon it. If every doctor would vaccinate every babe born, with the same fidelity that he ties the placental cord, small-pox would in a few years be a disease unknown in "polite society." I concentrate my idea in one brief sentence, "segregate, fumigate, vaccinate."

TYPHOID FEVER

I know of nothing better calculated to cause one to lose reverence for the law, than a careful perusal and comparison of the acts which stand upon the statute books of Kentucky, looking to the control of contagious diseases. The law says, "that no one shall pollute any running stream or water course in the State," and there is a heavy penalty attached for the violation of this provision. In the face of this plain edict of the law, as a matter of fact, every city, beginning with Louisville, the largest, and every town down to the smallest, is pouring its sewerage directly into the water-courses and pumping the germ laden fluid back into the supply tanks for "home consumption." To say "that this should not be tolerated," is but to deal with a platitude, often quoted, and frequently reiterated, and as often neglected.

Assuming that no one will controvert the statement, "that typhoid fever is carried into the system either through the food or the drink," I raise the question, how can we prevent it? In answering this, I contend, that the purifying of the waters of the State is a practical impossibility. That it will not be accomplished to even a reasonable degree, I further state that there is more hope for the protection of the food supply, by reason of the fact that it is easier to meet the demand for the elimination of the "filthy fly" by screening, and by the use of large fly destroying traps. It is much easier to eliminate the breeding places of insects that contaminate the food supply, than to secure pure water.

Having thus defined my position on these two important points, I offer the only solution of the situation as I see it. As in the case of smallpox, with which I opened the paper, the prevention lies in "preventive vaccination." In the typhoid serum we have a "sure cure" if you will permit the use of a term now large-

*Read before the Trigg County Medical Society

ly appropriated by "the quacks." I would have the State and the Nation pass a compulsory act regarding the systematic and universal use of the typhoid serum.

In dealing with diphtheria, we have a far more difficult problem for solution, so far as combating the contagion, but much easier of solution when the question of treatment is concerned. Armed with a pure, fresh antitoxin, the doctor approaches a case of even pharyngeal diphtheria with a degree of confidence, that probably characterizes none other of the contagious diseases. The question of how to protect is a question far more difficult to decide, and when, and how to immunize, requires a clear head and a wise judgment. But assuming that the diphtheritic bacilli are present, the treatment is so decided, and satisfactory, that there is usually just two questions to be passed upon. 1st, Is the serum fresh and pure; 2nd, what strength shall be used? I want to go on record as "taking no chances." Use antitoxin in every suspicious case, and use in full doses.

WHOOPIING COUGH

Whooping cough is rapidly forging to the front as one of the great childhood destroyers. It has been looked upon as a comparatively harmless disease, which every child must of necessity contract, sooner or later. The serum treatment is still in the experimental stage, but I would urge, "take no chances," and use that which is on the market, and quarantine, segregate, fumigate, and vacinate, and eliminate.

TUBERCULOSIS

We come now to deal with "the prince of the mighty host of death" except recent reports indicate that pneumonia may dispute for the palm. Would that I could sound a more hopeful note. But so long as hundreds of thousands of the young are carried off every year by this mighty "Moloch," we must for a time hang our heads in humility, and plead for more light and a larger fund for experimental research along lines which promise so much. For the present we must lift our hats in reverence to the memory of Edward Livingston Trudeau, of Saranac Lake fame, and rely largely upon the "out-door-pure-air-life" which has reduced the mortality from 200 per one hundred thousand population, down to one hundred and forty-seven. Until the tubercular serum is perfected to a degree of certainty, we must remember Trudeau's optimism, and never give up.

OPHTHALMIA NEONATORUM.

I close the paper by calling attention to the fact that the State Board of Health of Kentucky has notified its members that the "De-

fense Department," will not stand behind any doctor who is sued for the loss of a child's eye if the physician sued has failed to use the "Crede method" at the birth of the child. The object is, of course, to force the physicians of the State to use the "one per cent. nitrate of silver solution in every case." In the hands of the physician the treatment is comparatively safe. Recent reports from ophthalmologists have thrown out a caution, by reason of "silver catarrhs" in certain cases. The faithful use of the preventive, will save many eyes, especially in the practice of the city physicians where gonorrheal ophthalmia is more common.

CONCLUSIONS

Universal use of smallpox vaccination and typhoid serum and immune in all exposed cases of diphtheria, and use full strength antitoxin in every case with suspicious deposit on tonsils.

Make the water supply as pure as possible, but take no chances and use none but boiled water for drinking purposes.

Quarantine all cases of sore throat, and from all acute skin diseases keep other children away.

I close with the word "Utopia" as I began, with the conviction that even the chimerical and fanciful may be helpful if it leads to the practical and the wheat is winnowed from the chaff.

THERAPEUTIC MEASURES OTHER THAN DRUGS.*

By CURRAN POPE, Louisville.

To be given the broad subject of "Therapeutic Measures Other Than Drugs," is like turning a hungry and starving man into the marvelous garden of Aladdin, or into a land like Canaan, flowing with milk and honey. We feel, as did Lord Clive, when he said in that memorable speech before the House of Lords, that with the opportunities offered by his Sudharship of India, and his failure to avail himself of the chances for theft, that he stood astounded at his own moderation.

So, Mr. President, I began to feel, that, in having been selected to write upon this subject, I must come out of the test, astounded at my own conservatism. The field is large, fertile, and easily cultivated. The climate is genial, and he who would delve into the rich, dark loam of measures other than drugs, will not only raise a bountiful crop, but will be repaid by that bountifulness that has ever been the measure of Nature. Physio-therapeutics has ever been the cornucopia of medicine. Despised, taunted, cuffed and

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beaten, she has come through the ordeal, and has, and is beginning to come into her own. Though the stepchild of medicine, whose parents have ever been her hardest tyrants, she has at last, broken her bonds, asserted herself, and to-day, with healed scratches, with proper raiment and self-respect, she sits at the therapeutic table and few gainsay her right. With the pardonable pride of twenty-five (25) years of experience as pioneer in their use, I come to-day with a plain and simple message, asking that you use these measures and use them daily in your work. I shall not overload you with heavy technical details, but shall select a few simple measures that you, as general practitioners, can find in every town and hamlet; aye, in some instances, in every home. In a few cases, we must deal with heavier and more weighty measures, which, while possibly intended solely for the specialists' use, yet of which you should know in order that you clearly discriminate and at least suggest to your patient intelligently the proper measures and places, where relief can be found.

PSYCHOTHERAPY.

Of all the measures other than drugs, psychotherapy, in the broadest sense, is the most necessary, is more bunglingly practiced and least used of all remedies. Every physician is a psychotherapist when he really and truly encourages his patient; when his personality and power for good is used to the advantage of those who are sick. If any one doubts the value of mental attitudes and their beneficent or banal influence on the *corpus humanis*, he has but to study the physical reactions of pleasure and hope, and fear and despair, to realize that herein lies a field too little tilled by the practitioner. To teach self-help to others, is often to educate yourself into a broader philosophy, to make you a better man and a better physician, a more valuable unit in the herd. Physical measures or physiotherapy possesses a psychic side that is often covered by that obsession of many people and many doctors, suggestion, and in a sense this is true, but suggestion is not as easy and not as satisfactory in many cases that are chronically ill, as is popularly supposed. Physiotherapeutic measures, by increasing circulatory activity by increasing oxidation, by removing waste material and repairing tissue, brings about of itself, a feeling of *bien faisance* that is highly favorable from a psychic side. I defy any one to deny this, that he, who when a little out of sorts, has exercised or received a general massage or tonic hydrotherapy, but what has not alone been better physically, but mentally. Better body, better mind. To reach many patients, simple measures are only necessary.

To some the power to work, the mere knowledge of a sufficient recovery for partial activity, is of itself, all that is necessary, for we must ever remember, as James has taught us, that there is a latent reservoir of strength, mental and physical, that we can judiciously call upon in time of need. Keep busy, for "idleness" says Edmund Burke, "is the hot-bed of temptation, the cradle of disease, the waste of time, the canker worm of felicity."

Justice Hughes truly said, and I not alone believe in his dictum, but practice it; he said "I believe in work, hard work, and long hours of work. Men do not break down from overwork, but from worry and dissipation."

It must never be forgotten that work maintains a balance for the sane, and can at the proper time and place be made a powerful factor in the maintenance of the health of those who have known what illness is. It is a loadstone to draw one away from those inner complexes that tend to destroy usefulness. If we simply dream of to-morrow, and regret yesterday, we will accomplish nothing. Now is the day and now is the hour, ever present, in which to work. Try to rise to the limits, the maximum limits of capacity.

Much can be done by a close study of the physical appearance of the individual, as pointing to the springs of character, and the close observer is thus able to delineate the inner mechanism from the outer appearances.

These studies, have been of late carefully gathered-together by Dr. K. M. H. Blackford, and can now be obtained in a course, that is very valuable, as to knowledge and usefulness in its practical application. The teaching of observation to a physician should be a portion of every medical curriculum. If ordinary measures of persuasion, argument, reasoning, to which the name of Dubois has been attached, fails, we may with profit, follow the combined methods of rest treatment and partial analysis, so ardently and scientifically presented by Dejerine, and which, in my hands, has given some of the most satisfactory of results. If the patient is still recalcitrant, and the milder measures fail, if the unconscious so inhibits the conscious as to be invulnerable, then nothing is left but a complete investigation of the case by psycho-analytic methods. This is a long and tedious route, but has thrown more light on neurosis, psycho-neurosis and psychosis than any other single measure and the various mental mechanisms that produce these various forms of neurotic and psychic disorder, will be found to be those that underly many of our ordinary every day mental activities. Of the great value of religion to many, I need not here speak, more than in passing, to remark, that from the adumbration of antiquity to the present day

man has ever worshipped a Divinity, and that there is inherent in most of us a desire to recognize a Superior being. Of the powerful influences of Religion upon herd instincts and actions, books could be written; suffice it to say, it has been one of the most powerful of all the influences that has led in restriction or repression of the normal instincts of man and ever present in an endeavor to sublimate all those grosser manifestations of normal, healthy individuals or restrict them to narrow and legalized channels. In this connection, a word might be said regarding those cults, whose mysticism is their fascination to many people, whose writings are of such hazy character as to appeal to unconscious complexes in many people's mind. Those cults come and go, have their innings, but as a rule, in time disappear. For those who profess Christianity and believe in its tenets, I would suggest the perusal of Rev. Dr. Cooksey's recent work on Christian Science. The reverend Doctor and the critics of the book, seem to agree upon a few facts, that Christian Science is not scientific, is not Christian and to the Christian mind is blasphemous. Psychologically it causes considerable additional repression in many neurotics and owing to its mysticism, appeals with special emphasis to this class of people, who instead of additional repression, need analysis, re-education and re-orientation to a practical every-day life free from deceit and mysticism—"Know thyself."

HYDROTHERAPY.

Cleanliness is not next to Godliness; it is a part of Godliness. The physician in private practice has a missionary field in many instances in teaching this form of Godliness.

With water so plentiful, and soap so good and cheap, there is no reason why the decaying and putrefying layers of the epidermis may not be removed, and in their place, cleaner and healthier ones developed. And what is true of the external surface is equally true of the internal. Drink plentifully of water; it is Nature's beverage and only harmful when abused. Pure, clean, fresh and cold, water is the drink that ever sustains and never inebriates. And do not subscribe, in *healthy persons* to that time honored and hoary-headed chestnut, that water must not be drunk at meals. Of this I have had considerable to say a number of years ago and recently. The experiments of Hawk, clinical studies and a knowledge that enzymes work well in a weak solution, never in concentration, is an explanation why a reasonable and fairly free use of water at meals, is a valuable adjunct to the digestion, although it should never take the place of mastication. It is sad to relate, but the stomach has no teeth, and while the food is in the mouth, molar activ-

ity should be such as to secure comminution before the bolus enters the stomach.

A great many of us use heat and cold, but very few realize the advantage of an alternation of these thermic measures. The *raison d'être* is that the change of thermic irritation from one stimulation to another brings about a neural stimulation calculated to arouse many local and reflex effects.

Of cold sponging, I am convinced that many to-day will accept the dictum of its value in fevers. It is rarely performed correctly. Of its technic, we cannot here deal, as text books on these subjects are easily accessible. (Pope, Curran; "Practical Hydrotherapy" 1909). There is always a tendency to slick over the surface, rarely using sufficient amount of friction. In the application of cold to the cutaneous surface, it must not be forgotten that the moment cold is applied, there is a contraction of the surface tissues, blood vessels, etc., as a result of which, the muscular tissues endeavor to rally to the cold and maintain temperature. Friction dilates the blood vessels, allows of heat abstraction, invigorates the nervous system, produces widespread reflex and many local changes, and gives entirely different results from a poorly applied sponge. The method is so simple, the apparatus used, found everywhere, that it is strange it is not more often and more scientifically used. It is to be hoped that we can revive some interest in this most excellent measure.

How many physicians do you believe ever open a text book or read conscientiously of the value of hydrotherapy? Very few. It is no new treatment, but one that antedates history, and has in the hands of the quack, charlatan and scientific medical man, relieved many sufferers, who would otherwise be hopeless invalids all their lives. It seems bizarre and curious that medical men's minds should always seemingly turn to chemical methods of treatment, when in many instances, simple physiotherapeutic remedies would relieve by the somewhat simpler method of utilizing the forces of repair that are ever present in the human body. Even in cases where these measures are not altogether curative, they possess an adjunct value that can only be appreciated by those that have and are using these measures. Why will physicians overlook such simple measures as the icebag, ablutio, dripping sheet, pack and fomentation, all capable of being applied in the home and requiring no bulky apparatus. Is it because it takes time and some trouble? I hope not.

MASSAGE, VIBRATION AND MANIPULATION.

Perhaps of all the measures of therapy in this line, the vibrator is most extolled, but rarely used with care and judgment. In its

application generally to the human body, the average vibrator is too weak and stronger machines are needed. For the ambulant patient, vigorous mechanical measures are needed and for that reason, machines must be more powerfully constructed than the vibrators that are now constantly in use by the tonsorial fraternity. It is sometimes a cause for wonderment on my part, why physicians seem to avoid the personal treatment of local conditions manually. There are many joint, muscle and local nervous troubles that could be overcome by well-directed manipulations, supplemented by vibration, but we rarely hear of any treatment, save salves, lotions, heat or cold, instead of that personal endeavor to relieve these conditions, the apparatus for which every two armed man carries around with him, ready for instant use. For many years I have personally used these manipulations and I can assure my fellow practitioners that the examination and treatment of such conditions will develop a sense of touch, to which they have been strangers. The spine is a fertile field in which to work, not by replacing bone and correcting deformity, but because of the many reflexes that can be stimulated or inhibited by manipulation, pressure or concussion. While manual massage in its general application had best be left to trained operators, there is no question of a doubt but what this localized bodily and spinal work should be kept in the hands of the physician himself, and their application made with a distinct object after a careful and correct examination and diagnosis. In acute diseases it has a wide field, and the practitioner at the bedside loses many valuable opportunities to aid his patient, to more quickly overcome diseased and disordered conditions.

ELECTRO-THERAPY.

In this tremendous field, we can only comment on a few stray points here and there. Let me first call your attention to the uselessness of the faradic or so-called "family battery." It is obsolete. Like the razor purchased for twenty-five cents, it is made to sell, not to use. We would respectfully suggest that this battery has done more harm to the scientific practice of electro-therapeutics, than any other factor. Most people speak of electro-therapy collectively, under the caption of "having tried electricity," which, when translated usually means, I have used a faradic battery." To so treat patient puts a doctor usually on one or the other horn of a dilemma, briefly described as charlatanism, on the one hand in knowing better, and ignorance on the other. In its place has come the modern sinusoidal apparatus that speaks for usefulness and efficiency, provided it is a real *sine* current, with equal sines above and below the

abscissa line. If, instead of loading patients with laxatives, cathartics and salines, a proper diet, mechanical laxatives and the sinusoidal current were employed, there would be fewer people dependent on pills. Of the value of the sinusoidal current in developing the abdominal and intestinal musculature, I have often demonstrated in clinical experiences, running into thousands of observations. Of all the electric currents now in use in medicine, to my mind, the galvanic current is still the best, but, owing to its polar effects, it must be handled in such a way, as to avoid injury on one side and secure benefit on the other. This current has a wide and useful range, but is a current that is capable of doing the greatest amount of harm in the hands of the careless or untutored, who know little of its physiological action and less of polar reactions, for these are directly opposed, one to the other. The static, while valuable, is less so than is generally believed, much less so than the galvanic, high frequency, or sinusoidal. It can, in the hands of the expert, do much, but as generally applied, it is often valueless. The spark, blue flame, breeze and static wave currents (Morton) when rightly applied will well repay for the time and trouble of its use.

The high frequency current is now quite popular because of the simplicity of securing a vacuum tube discharge, but if we stopped here comparatively little would be accomplished, although the vacuum tube, where sufficient current is obtained, will cure many skin and mucous membrane lesions and disorders; and yet the greatest good is found in the various other modalities such as auto-condensation, auto-conduction, etc. To really secure results one must have a high-powered machine that can deliver large quantities of current to the patient under treatment with a multiple spark-gap or even discharge. The use of the D'Arsonval current by means of metal electrodes, with its temperature (heating) and circulatory effects is undoubtedly one of the most valuable currents we have in the treatment of deep visceral conditions, such as those of the chest, abdomen and deep-seated joint lesions.

Auto-condensation as a means of lowering blood pressure or its use as above described to kidney lesions, will bring about results surprising to the uninitiated.

How far in playing the piano could you go, without a teacher, upon simply being shown a few cords by the salesman? Sounds ridiculous, does it not? And yet such is the present method in electro-therapy. If you contemplate using these currents, drop your practice for three or four months, study in some competent school, or under some physician and learn the different modalities, their action

and use, and you will awake to the fact that the faradic battery and static machine are not the sole and only methods used by scientific physio-therapist. And lastly, let no man induce you to buy a machine that is cheap and useless or simply for its "psychic" effect on patients. This "psychic" effect usually lasts for a few treatments, but if you cannot "deliver the goods" it acts as a boomerang, and you will injure your reputation. From twenty-five years of experience, let me suggest that you buy a good machine, and a good machine only, and that you purchase none without you know how to use them and that they are the best the art has produced to date. They will be expensive. Learn to repair and keep them in order, for few of you live in large cities, where skilled mechanics can be found. If you cannot comply with these requirements, give it up. Do not buy a machine "to get practice." Buy one because you honestly know how to use it and want to do better for your patients. Remember that there are many currents and that each piece of apparatus works best, when devoted to one current alone. To "do the electrical stunt" will cost you many thousands of dollars.

A WORD TO THE PHYSICIAN HIMSELF.

Do not forget the value of rest. Try not to work or treat your patients on Sunday. Only pull the ox out of the pit. Take a vacation, such as you prescribe for your patients. Take a part of the time to freshening your medical knowledge, another part that will let the normal instinct to be merry and happy, escaping herd repression and even civilization, if that be your inclination.

Don't diet your patients on the basis of your own stomach, but take a broader and less dyspeptic view.

In conclusion, I may say that you will have less use for medicine and more use for Nature's forces the oftener you employ them, so do not forget that light, heat, cold, massage, water, the various modalities of the electric current, scientific psychotherapy and a strong personality, constitute an armamentarium so rich that you can ever and always extract from it without ever seeming to diminish its *quantum*. If to all of this you add vaccines, serums, biologic and chemical methods, you will indeed be a full and rounded physician, useful to your patients, a joy to your community and an honor to your profession.

DISCUSSION.

W. F. Boggess, Louisville: Dr. Pope in his lengthy and interesting paper has given us more real, wholesome, practical medicine than any single paper or any of the several papers that will be read here. To-day, when any physician de-

pends alone upon the administration of calomel and quinin, and upon the administration of our standard drugs, he is going to be a failure both as a physician and as a man. We are allopaths, and by allopath I conceive we are doctors. We must use every means that is known and obtainable for the benefit of patients, for the control of disease, for the cure and prolongation of life, and until we get away from the idea that medicine alone is for amelioration, we will never be successful. The element of suggestive therapeutics plays an important role in the practice of medicine. If you cannot make a patient feel better by your presence or by your suggestion, you are not the right person for that patient, and she would do better perhaps by getting another physician. The personality of the doctor, the forcefulness of the doctor, the optimism which the doctor instills into a patient, will enable him to gain her confidence, and this is worth more than all the medicine you may give her. Call it what you will, it is a great factor in the success of a great many men of our profession. There was not a great man mentioned at the banquet last night whose greatness did not depend very largely upon his individual personality, upon his ability to impart knowledge and confidence to his patients. That is the making of a successful doctor.

With reference to Christian Science, I heartily endorse what Dr. Pope has said that in Christian Science there is much that is neither Christianity nor science. I must confess, that I learned from our homeopathic friends. We have a splendid man in Louisville, as good as any man in this audience. It is true, he is a homeopath. I learn from him. I do not hesitate to use homeopathy whenever I can get good out of it, and I wish I knew more about it. Let us take osteopathy. There are many relations of osteopathy which you and I should know. If I find a patient who needs osteopathy, I send him or her, as the case may be, to an osteopath, a friend of mine, who knows more about it than I do. If a man is capable of making mechanical manipulations, and I have a patient in whose case I think mechanical manipulations will do good, I send that patient to a man who knows how to give these mechanical manipulations.

So we must get all the good we can from the homeopath, the osteopath, and from the various pathies which the world is permeated with. There is some good in all of them or the followers would not be as successful as they are. If it were not for the good they do there would be no call for their services. We as physicians should fit ourselves to understand and take from these popular pathies, for it would not only be policy to do so, but it would be an essential factor in our success in handling cases. If we take from them we would soon run them out of business, as has been pointed out so well by Dr. Pope.

Again, let us take hydrotherapy, a subject that

has been classically presented by Dr. Pope. There is not a thing in hydrotherapy that is not within the bounds of every one of you physicians in the country or anywhere else. If you will take time to study the use of water given internally, externally and eternally, and use it scientifically and intelligently, it will not be necessary for you to send patients to the various water cures and to the various institutions where hydrotherapy plays such an important part in restoring patients to health.

Leon L. Solomon, Louisville: It is a matter of considerable satisfaction, looking over the program, to observe that, with few exceptions, the papers, prepared for this meeting, bear on the very important matter of "diagnosis" and "pathology." This meeting will be memorable for the little time, which has been allotted to papers or asked for by Essayists, dealing with the question of "treatment." Not that treatment is any less important to-day than formerly, but, as indicating the trend of modern times, pathology, leading on to correct diagnosis, is just now more engrossing.

Once a diagnosis has been properly and accurately made, an old axiom has it: "treatment suggests itself and the cure, if cure there be, is inevitable."

I have listened to this particular paper, by Dr. Curran Pope, with great interest. Tuesday morning, there was presented, a paper on pneumonia. Out of all the discussion, the Chairman had to finally remind the fellows of the society, that no one had offered to discuss "treatment" and he called on Boggess to respond to this part of the subject. Unquestionably, we are getting farther away, all the time, from drug therapy and we have learned, in pneumonia, that there is little dependence to be put in drugs.

Twenty years ago, when drug therapy was at its highest, I recall that Osler's volume on "Practice" was much criticised, because the great teacher had so little to say on "Treatment." The volume was then, as now, replete with etiology, pathology and diagnosis. Dr. Pope is one of the few men, who, with splendid talents, has devoted his professional career to this all important subject. During the years I taught materia medica, it was included under the caption "The Invulnerable Forces in Medicine," such being, then, heat, light, electricity, massage and mechano-therapy.

For a number of years, I have followed, with entire success, a procedure, first brought to my notice by Dr. Baruch of New York, the celebrated hydrotherapist. I speak of the application of cold water to a large number of children and grown-ups, who are sufferers from so-called "catarrhal processes" and frequently "take cold." For them cold ablutions to the chest and irrigations of the nose, (simply snuffing cold water into the nose will often suffice), will effect many

cures. In applying cold water to the chest, we, at first, temper the water for the little ones and the infirm, until finally the coldest water, as it leaves the faucet, or as it is drawn up from the well, even in winter, becomes a source of delight. In another class of cases, "acne-comedones," I have used, alternately, hot and cold water, viz., hot towels, followed by cold ablutions, especially to the face, the very distressing and disfiguring ailment readily relenting, under this treatment. Likewise, for many years, I have most successfully advocated hot and cold applications, alternately, in the treatment of external haemorrhoids.

Carl Weidner, Louisville: In the first place, I want to compliment Dr. Pope on his excellent paper, and also the speakers who have taken part in the discussion for expressing sentiments which I feel very strongly. I am glad to see that we are getting away from the time when the medical profession thought one of the most important things was to write prescriptions for drugs. We have made rapid progress in medicine, not with drugs particularly, but with modern products mainly of the biologic class.

In the main, I wish to sanction Dr. Pope for bringing before the medical profession this subject in the eloquent manner in which he has presented it. The time has come when the younger men especially and the older ones, will have to learn by experience, well recognized, that we have comparatively few drugs which are really of benefit, not to speak even of cure. I have often said, we have very few specifics. You can probably name five, if there are that many.

I cannot agree with everything that was said with reference to the use of electricity, and perhaps I may be classed among the ignorant in that regard, but I believe electricity depends a great deal upon suggestion, and I never could grasp the electrical art, but let that be as it may.

There has been a remarkable statement made in regard to the cure of aneurysm, and I am anxious to hear Dr. Pope's method. It is cured without rest or anything else. As far as I know, there is only one way to cure aneurysm, and that is Nature's cure, where the coats of the arteries are diseased, and where the arteries have recovered their lumen and have established a possible channel again.

I would like to hear further remarks from Dr. Pope in regard to that case.

Curran Pope, (Closing): I feel very much like Dr. Solomon, that diagnosis is absolutely essential and is an important part of the physician's weapons, but after all, as far as the real work in life is concerned, it is merely a means to an end. That is the way I view it. A few of you know that the Christian Science doctrine absolutely and emphatically in so many words denies Christ. If you do not believe that, read Mrs. Eddy. I thank Dr. Solomon for using the word

invulnerable. I shall have use for it in the future, and I know of no better man in the world than Simon Baruch, who was the original inspiration to me to study more closely hydrotherapy.

Answering Dr. Weidner's question as to the means adopted, I will say there were two, the so-called hyperemia of the arch of the aorta, by means of the D'Arsonval current, a method commonly known as diathermy, and second, the manipulation of the seventh cervical vertebra, which slows the heart beat, lessens its area as well as contracting the aorta. As a result of these two methods the patient, I did not say was cured, but I said was functionally well. Please note the difference. I did not use the word cured. The aneurysm was at the arch and below the aorta, and the diagnosis was made by percussion and by means of the fluoroscope.

One word in conclusion. I want to ask this question; how many of you believe that there is anything beyond fresh air, rest and food in the treatment of tuberculosis? That is the accepted treatment—rest in bed, superalimentation, and what besides? Rest and fresh air. I do not believe fresh air is of as much importance as we think it is. They will not do well when the fresh air is hot, and they do well when it is cold. Let us go into that phase of the subject. How many men ever think of creating autogenous vaccines in a patient's lung with the hard X-ray first? How many of you have seen a doctor try to heal a lung with congestion hyperemia, with diathermy so-called? How many of you ever put on cold packs to the chest, used the drip sheet, the local sponge to stimulate Nature's way of healing the lung? Gentlemen, I do not treat cases of tuberculosis often. I have treated half a dozen cases in the last year or so for physicians in their own families or in their practice, and I have yet to see a case that has not gained in flesh and gotten up in an incredibly short time by the use of these measures. After all, the best way to increase your appetite is to take a cold bath. You have been swimming, and just as soon as you return home you want a sandwich. The cold chest packs, the drip sheets, the massage, the rest, the food, fresh air, are all useful measures of treatment. With diathermy, with the use of the X-ray, with possibly the use of biologic products with small doses of tuberculin, you have a range of therapy that is very useful and beneficial. It is a mean thing to say, but sometimes it makes me feel like gnashing my teeth when I see that tuberculosis sanitariums in their therapy do not avail themselves of all these therapeutic possibilities and the good that would come from them. I will not say it is criminal to neglect these adjuncts of treatment, but nevertheless, these tuberculosis sanitariums are not fitted up to use them as they should be.

THE FORUM

TO THE EDITOR:

The following resolutions were passed by the Jefferson County Medical Society on the death of Dr. William L. Rodman, and adopted March 13, 1916:

Though Dr. Rodman lived out of Kentucky for the past eighteen or twenty years, he in no way passed out of the current of professional interests in his native State, and this society felt him as of almost active membership. We have noted with pride how his active mind, brought him by degrees, deservedly to the position of the highest public dignity attainable by a member of the profession in any country, and it rejoices that his fidelity of purpose in the interest of general professional welfare, linked with his untiring industry in scientific research have made for him a place among the honored of Kentucky's masters in the history of medicine and surgery.

Hence, though we rejoice in these achievements, we share in memory of many personal ties, with the family of Dr. Rodman in their bitter sorrow, and with his associates of the medical profession not only in his native State, but of the entire medical field of this country, in the loss sustained in his untimely death.

(Signed)

H. H. GRANT,
J. M. RAY,
W. O. ROBERTS.

Do You Know That

Sags in roof-guttering may act as mosquito breeding places?

America's most valuable crop is babies?

The public cigar-cutter is a health menace?

The United States Public Health Service maintains a loan library of stereopticon slides?

The typhoid rate measures accurately community intelligence?

Whooping-cough annually kills over 10,000 Americans?

Bad housing produces bad health?

Rocky Mountain spotted fever is spread by a wood-tick?

There is no Federal institution in the continental United States for the reception and care of lepers?

Plague is a disease of rodents?

Malaria is spread by a special mosquito?

House screening is a good disease preventive?

Fingers, flies and food spread typhoid fever?

Pellagra may be prevented or cured by proper diet?

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NEXT MEETING STATE ASSOCIATION.
HOPKINSVILLE, 1916

Lyon—The Lyon County Medical Society met at the office of Dr. Molloy of Kuttawa, on April 19th, 1916, at 2 p. m.

The society was called to order by the president. The minutes of the previous meeting were read and adopted. The following members were present, to-wit: Drs. Molloy, Linn, Purdy, Travis and Travis.

D. J. Travis reported a very interesting case "Typhoid Fever," and the use of phylacogen in treatment of same.

H. P. Linn reported a case of "Atrophic Cirrhosis of Liver," which was enjoyed by all present.

L. P. Molloy presented before the society a case of Trachoma, and described the different modes of treatment of same.

The society adjourned to meet at Eddyville, May 16th, 1916, at 2 p. m.

F. M. TRAVIS, Secretary.

Rowan—The Rowan County Medical Society met at the office of Drs. Blair on April 25, 1916. The purpose of this meeting was to reorganize and elect new officers for the year, 1916. Members present: Drs. Blair and Blair, Wilson, Thomas, Seaggs, Davis, Nickell.

The following officers were elected: Dr. Davis, President; Dr. Seaggs, Vice President; G. C. Nickell, Secretary and Treasurer; F. K. Blair and Dr. Thomas Censors.

After some interesting discussions the meeting adjourned to meet again Tuesday, May 9th, 1916, at the City Hall.

G. C. NICKELL, Secretary.

Optimism.—To look on the bright side of life and its affairs with an enthusiastic belief that everything is all right and for the best, is ideal. This is especially true as it applies to those who come into contact with the sick. A physician, above all men, should be an optimist—ready to stimulate hope though he may not have it himself. Hopefulness in the countenance and optimism in the words and actions of the physician are as sunshine in the sick room; they stimulate hopefulness of recovery in the sick and a courage that often has potent influence for good. Even when recovery is not possible, the Journal of the American Medical Association thinks that good, not harm, is done. They make life worth living while it lasts. The psychic influence is always felt so long as conscience remains. Paget, speaking of hypochondriacs, says: "Your chances of doing good will depend mainly on the skill with which you can influence the patient's mind; for of the components of his case the mental condition is the worst."

NEWS ITEMS AND COMMENTS

NEW OFFICES OPENED BY DRs. GIVENS, WELLS & MOORE.

On April 4, at 10 o'clock, Drs. Givens, Wells & Moore received their patients for the first time in their elegant new offices in the Reister building.

The large airy rooms, to a great extent newly furnished, and decorated with ferns and blooming amaryllis, were filled during office hours with patients and personal friends.

The elevator service in charge of Mr. Lawrence Fuller, expert mechanician, to these third floor rooms, was perfect and quite a convenience to those not particularly fond of climbing stairs.

These well known doctors are to be congratulated on their up-to-date offices, which are thoroughly equipped with all the extensive apparatus instruments, etc., necessary for the up-to-date physicians, surgeons and specialist. The electrical apparatus used by these physicians has just been installed by Mr. French Patterson.

Drs. Givens, Wells & Moore entertained the Harrison County Medical Society and a few friends in their handsome new offices in the evening.

Papers were read and discussed by Drs. W. B. Moore, Josephus Martin, W. H. Carr, of Claysville, and Todd Smiser.

Dr. Granville Hanes, noted surgeon of Louisville, read a paper on his specialty.

After the business session a smoker was enjoyed and buffet luncheon was served in the adjoining rooms.

During the evening music on the Pathephone, furnished by Mr. C. T. Wickliffe, was very much enjoyed. The invited guests were the Cynthiana dentists, also Mr. J. M. Allen, Mr. J. T. Wilson and Mr. Jos. H. Reister.

DR. J. M. LOGAN DEAD.

Judge Chas. W. Logan returned Wednesday April 19, from Kilgore, Ky., where he went in response to a telegram announcing the serious illness of his father, Dr. J. M. Logan, who died on Friday, April 28th from heart failure, following an attack of grippe and pneumonia, and was buried Easter Sunday in the family burying ground near his home.

Dr. Logan was formerly general physician for all the Four Mile creek mines in Bell county, and was well known in this locality.

At the time of his death he was 69 years old and had lived on his farm where he died for over forty years.

Dr. Logan enlisted in the Civil War when only 13 years old. He was a member of the Federal Board of Pension examiners for many years and also a member of the State Health Board for

several years, and had a large and lucrative practice. He never held a political office in his life, but was chairman of the Carter County Republican Executive Committee for many years.

Dr. Logan married Miss Attilia Hargis, daughter of Col. John M. Hargis, of Rowan county, and and a sister of the late Thos. F. Hargis, Chief Justice of the Court of Appeals of Kentucky just before his death.

Dr. Logan is survived by his widow and six children, all of whom were present at the burial. Their names are, Mrs. John Lord, of Syracuse, N. Y., Mrs. S. Smith, Van Wert, Ohio, Douglas G. Logan, Chicago, Mrs. Chas. H. Shelton, Carter county, Miss Maud Logan, Kilgore, and Judge Chas. W. Logan of this city.

Dr. J. C. Sullivan, of Mayfield, was a business visitor in Paducah recently.

Dr. John L. Dismukes of Mayfield, has returned recently from Hot Springs, Ark., where he went for treatment.

Dr. C. L. Wheeler, wife and son, who have been visiting in Boston and other eastern points for the past few weeks, have returned home.

The Warren County Medical Society met April 12th in the council chamber in regular monthly session. The feature of the meeting was a paper on "Prostatectomy," by Dr. C. F. Anderson, of Nashville, and which was generally discussed.

The Academy of Medicine of Hopkinsville, met April 17.

"The Spine and Spinal Diseases" was the subject for the evening. A quiz was conducted along this topic and the meeting was very interesting.

Dr. H. S. Keller, of Frankfort, has resigned from the State Tuberculosis Commission. Dr. Keller has been a member since the board was created in 1912, and he said he can no longer devote the time to the duties of the commission he feels that a member should.

The Bourbon County Medical Society met in the court house, Thursday, April 20, at 7:30 o'clock, for the election of officers. The following is a part of the program as carried out:

Report of interesting cases. Paper on "Vascular Surgery, Transfusion of Blood, and Repair of Aneurisms," by Dr. W. O. Bullock, of Lexington.

The Christian County Medical Society held its regular monthly meeting April 17th at the Avalon at 1:30 p. m.

This was a very important meeting and a splendid program was scheduled, as follows:

"Tonsillitis," by Dr. Dade; "Obstetrics in the Country," by Dr. Sandbach; "Meningitis," by Dr. Gaither. Some interesting clinical cases were also presented.

Dr. Warren Sights, son of Dr. H. P. Sights, of the Western State hospital, has been signally honored by appointment as house surgeon for the Presbyterian hospital at Chicago. Dr. Sights graduated about two years ago and the recognition thus paid to his ability is of the highest order, and gives great pleasure to his family and friends.

Dr. F. N. Simpson, of Milburn, was operated in his home by Dr. Mosby for strangulated hernia recently. Notwithstanding the fact that the doctor had a fractured hip about a year ago and is one of the oldest practitioners in Carlisle county, he has made a rapid and uneventful recovery. Drs. Gilliam, Marshall and Dunn assisted in the operation, his son, Dr. Lloyd Simpson, being absent at the time."

While driving in the country Wednesday night, April 14, to visit a patient, Dr. Owen Carroll was thrown from his buggy when a fractious horse he was driving ran away. His shoulder was dislocated and he received several bad bruises about the body, but none of them serious, attending physicians stated. When Dr. Carroll realized that he was not able to control his horse, he guided the animal to strike a cow that he saw in the road, hoping thus to stop the horse. Dr. Carroll was thrown over the horse and cow, lighting in the road ahead of each.

The visit to the East Ashland city schools by Dr. John McMullan of the U. S. Health Service, and Dr. P. E. Blackerby, of the State Board of Health, Dr. W. A. Berry, of the city Board of Health, and Superintendent J. W. Bradner, resulted in the discovery of seven cases of trachoma, an infectious disease of the eye, commonly known as granulated lids.

Dr. McMullan operated upon the eyes of Nancy Pruitt and John Tisdale, two of the children found suffering from the disease. The operations were performed at the King's Daughters' Hospital and was witnessed by most of the physicians of Ashland, and several from Catlettsburg.

Drs. Wesley and Sweeney were called to Teddy April 25th to verify a report that smallpox had broken out there. They report several well-marked cases in that vicinity, but all of the mild form. A quarantine was ordered against the infected district. There is a probability of several new cases.

Dr. J. T. Owen, of Cloverport, died April 13, 1916, at 9:30 a. m., after a lingering illness of a

complication of diseases. He was 76 years old, and had been practicing medicine in this city forty-five years.

He is survived by his wife, one daughter, Mrs. J. E. Matthews, of Philadelphia; one son, Jess Owen, of Louisville; three brothers, William Owen, of Glen Dean; Richard Owen and J. A. Owen of California; four sisters, Mrs. Lucy Hunter, Glen Dean; Mrs. F. T. Heyser and Miss Priscilla Owen, both of DeLand, Fla., and Mrs. Adelia Owen, of Greenville.

Free Clinic Closes.—Another monthly free trachoma clinic was concluded at Greenville on Saturday, April 3. It was conducted by Dr. S. E. Bailey, of Madisonville. Ninety-one patients were examined and twenty-two operations were performed by Dr. Bailey and his assistants. Miss Colvin, visiting nurse, assisted by other nurses, cared for those operated on in the temporary hospital. A great deal of interest has been manifested in the eradication of trachoma from Muhlenberg county since the visit of Dr. J. H. McMullan, Federal trachoma expert, who held a clinic in January.

Col. L. M. Maus, secretary of the state tuberculosis commission, spoke at Greenville on Saturday night in the interest of a tuberculosis sanatorium to be located at that place.

Dr. W. B. O'Bannon, of Stanford, had a narrow escape from being killed when a freight train backing up the hill from Rowland struck his motor car. The machine was torn into smithereens, but Dr. O'Bannon jumped out in time to save his life. The muscle of his right leg was bruised but otherwise he has no ill effects of the injury.

Dr. O'Bannon had started out Lancaster street, and did not notice the freight train backing up from his right as he started across the tracks, his attention being diverted to some freight cars on the siding on his left. Before he knew it, the rear car was upon him, struck his machine near the front end, and threw it to the left. Dr. O'Bannon jumped for his life and it was well that he did so, for in a few seconds, quicker than it takes to tell it, his car was a mass of scrap. His car was a runabout which he has used extensively in his practice.

Dr. A. F. Shepherd, who for over twenty years was connected with the state institutions for the treatment of the insane in Ohio, has retired from the state service and will in the future devote his time to the management of his sanatorium, "Orchard Springs," located four miles north of Dayton, Ohio.

For five years prior to his retirement, Dr. Shepherd was alienist member of the Ohio State Board of Administration, which has complete

supervision in Ohio over the 20 state institutions in which are treated Ohio's 25,000 insane and defective citizens.

He has recently enlarged his sanatorium and installed modern equipment for the treatment of nervous and mental diseases alcoholism and drug addictions. Dr. J. C. George, formerly superintendent of Miami Valley Hospital, Dayton, is associated with Dr. Shepherd in the management of Orchard Springs, as resident superintendent.

The physician's place in society and the medicine of the future were discussed by Dr. Charles William Dabney, president of the University of Cincinnati, before the Premedical Society, in the lecture rooms of Dr. J. W. Pryor, at the University of Kentucky.

In discussing the physician's place in society last night, Dr. Dabney compared the modern doctor with the doctors of the old school. He said that the duties of the physician of to-day were not merely to cure diseases but also to aid in preventing disease and directing the health and strength of the people of the community. The medical profession is becoming socialized, he declared, and is becoming more and more a community servant. At the University of Lower California, Dr. Dabney said, the university authorities provided for a medical examination once or twice a year for each student as a preventive measure and provided medical and hospital service, all for a nominal sum included in the matriculation fee.

The Boone County Medical Society met at the court house and elected the following officers for the year:

President, Dr. O. E. Senour, Union; Vice President, Dr. J. H. Grant, Florence; Secretary and Treasurer, Dr. S. B. Nunnally, Bullittsville.

The following doctors were in attendance: Drs. W. C. Hibbitt, Granville S. Hanes and Chas. Farmer, of Louisville; Theo. W. Singer, of Chicago, and the following Boone county doctors: Hayes, of Bullittsville; Menefee and Rankin, of Walton; Senour, of Union; Carlyle, of Rabbitt Hash; Richmond of Bellevue; Nunnally, of Bullittsville; Grant, of Florence, and Yelton, of Burlington. Rev. Baker, of Bellevue, was an interested visitor.

The visiting doctors from Louisville delivered interesting lectures that were highly appreciated by the meeting, several of those present pronouncing them the most entertaining and instructive they ever heard. Altogether the meeting was decidedly profitable to those who attended, and the Louisville doctors made a big hit with their rural brethren.

"I am weary," said Dr. Sachs and he killed himself.

Those familiar with the public points know why the faithful and overworked doctor was weary. Sympathy for him is profound, but it must not lead others who are weary to end all.

The brave man keeps on fighting. It is hard to keep it up, but we in the world and of it cannot quit the fight.

There is none more than the doctor who knows the ingratitude of the human race. His is the most unselfish profession there is. We know one doctor in East Chicago supposed to be well-to-do from the amount of business he does, yet he is only able to collect 35 per cent of what is owed him. A Hammond doctor, who is enormously busy, is only paid 45 per cent. of what is rightfully his.

We know a doctor who attempted an operation to save the life of a charity patient. The child died under anaesthetic before the operation could be performed. Suit was brought for damages and a jury awarded a verdict of \$1,000 against the doctor? He had to pay. Another was called to see an old lady suffering with blood-poisoning in the hand. It was also a charity case. The doctor lanced the hand and prided himself on saving it without amputation. Now the old lady exhibits a stiff finger and goes around telling of the doctor's poor surgery, notwithstanding he saved her hand and probably her life.

And there are a great many other doctors and men of other professions and trades, who are fighting the battles—men who come across ingratitude, but they must never decide that life is of no avail and commit suicide because they are weary.

One of the Louisville papers recently observed that there had been no case of rabies in a human being as a result of sundry instances in which rabid dogs bit persons in January. Later the dispatches recorded one fatality in a case in which the Pasteur treatment had not been taken. Experience in Louisville makes the case of Patrolman Montgomery, of Frankfort, seem altogether a hopeful one. The treatment at Bowling Green probably will be effective if the dog's bite caused infection. It also is always possible that the bite of a rabid dog may not cause infection. This is especially true if the dog bites through clothing.

The idea that a "madstone" will prevent rabies is a superstition. But there is a real treatment which gives ample ground for hope of avoiding the disease even if the wound is infected. And there is no good reason for feeling that certain infection has resulted. Many dog-catchers in cities which have dog ordinances are bitten by dogs of all kinds and in all conditions of health and few cases of rabies occur.

No precaution against rabies is over-precaution. But formerly many persons who were uninfected became panicky and died of nervous collapse or "false rabies," as physicians call it. There will be fewer cases of false rabies in the future. Undoubtedly there are many rabid dogs in Kentucky. And in Frankfort, where the canine population is much too large, it is inevitable that there should be cases of canine hydrophobia. No chances should be taken by those who are bitten by dogs. The State Board of Health's laboratory at Bowling Green is fully equipped for giving the Pasteur treatment, and it is the sensible and safe thing for victims of dog bites to take advantage of the facilities that the Commonwealth in its wisdom has provided.

BOOK REVIEWS

NEW AND NON-OFFICIAL REMEDIES.

A copy of *New and Non-Official Remedies, 1916*, has just reached us.

We fear that the profession as a whole does not as yet fully appreciate the character, the scope and above all the practical value of this book to the practicing physician. Perhaps it is because its size is so unpretentious, the price asked for it so small and the contents so conservative and unsensational in character that a hasty and superficial examination does not reveal its true worth.

Although it may be an old story to some of our members, we wish to emphasize anew some of the important points in connection with this book? In the first place, it contains descriptions of the newer remedies that are worth the physician's consideration. Being issued by the Council on Pharmacy and Chemistry, which is composed of chemists, pharmacists, pharmacologists and clinicians of the highest standing, it is authoritative; in fact, it is recognized as the standard and official authority on the newer remedies. When besieged by too persistent detail men, many up-to-date physicians fortify themselves behind it, taking the stand that they cannot afford to waste time on any preparation which has not gained admittance to its pages.

In the second place, it furnishes the physician who has learned how to use it with the answers to a great many perplexing questions that arise in the course of daily practice—and in many instances it is the only book which does furnish this information. For instance, what is the distinction between the action of a-etyl-salicylic acid (aspirin) and that of the other salicylates? What is the comparative toxicity of the various cocain substitutes? What manufacturers furnish Bulgarian bacillus preparations—medical foods—organ extracts? What is the iodin strength of the non-official compounds of iodid compared with the official iodides? What

is the standing of pneumococcus vaccine—of the Schick test—of radium therapy? Look in this volume; it is all there.

In owning and consulting this volume they are not merely forwarding the worthy cause of therapeutic reform; they are but doing justice to themselves and their patients. In fact, they cannot afford to do without it.

Price \$1.00 post paid from the A. M. A., 535 N. Dearborn St., Chicago.

Infant Feeding and Allied Topics—By Harry Lowenburg, A. M., M. D., Assistant Professor of Pediatrics, etc. Illustrated with 64 Text Engravings and 30 Original Full page Plates, 11 of which are in colors. Philadelphia: F. A. Davis Company.

This volume of nearly 400 pages is devoted, as the title suggests, not alone to the methods of feeding normal infants, but also entering with considerable details into a discussion of the various causes of abnormal nutrition and their correction. The colored illustrations of stools and the X-ray photographs are highly instructive.

Dr. Lowenburg's teachings are a valuable addition to the equipment of either practitioner or nurse.

Alcohol and Pneumonia.—The United States Public Health Service brands strong drink as the most efficient ally of pneumonia. It declares that alcohol is the handmaiden of the disease which produces ten per cent. of the deaths in the United States. This is no exaggeration. We have known for a long time that indulgence in alcoholic liquors lowers the individual vitality, and that the man who drinks is peculiarly susceptible to pneumonia. The Public Health Service is a conservative body. It does not engage in alarmist propaganda. In following out the line of its official duties it has brought forcefully to the general public a fact which will bear endless repetition. The liberal and continuous user of alcoholic drinks will do well to heed this warning, particularly at this season of the year when the gruesome death toll from pneumonia is being doubled.

Who would have thought that the tin can is a menace to the public health? The expert malaria investigators of the United States Public Health Service have found, however, that discarded tin cans containing rain water are breeding places for the mosquito which is the sole agent in spreading malaria. A hole in the bottom of the empty can might have resulted in the saving of a human life. Certainly it would have assisted in preventing a debilitating illness. Empty tin cans have no business about the premises anyway, but if we must so decorate our back yards, let's see to it that the can has a hole in the bottom.

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EDITORIAL

KENTUCKY'S ADVANCED LEGISLATION.

The following editorial, copied from the June issue of the *Southern Medical Journal*, will be gratifying to our readers, although the entire credit for the excellent legislation and conditions secured must go to the Kentucky profession as a whole and not to any individual members.

It is difficult to speak in terms of the superlative, but there would certainly seem to be no more progressive nor more useful state medical association in the country than that of Kentucky. Under the leadership of that great organizer, Dr. J. N. McCormack, and his able son, Dr. A. T. McCormack, it has made wonderful strides forward.

Recently, the General Assembly of that state, through the continued efforts of the Kentucky State Medical Association, passed four laws which are clearly indicative of the advanced ideas prevailing in that section.

The first is a law forbidding any malpractice suit against a physician after one year from the time of injury or neglect. Prior to this, a suit for malpractice could be filed any time within five years. Court records show that three-fourths of such cases were brought against physicians after one year from the date of alleged neglect or injury.

The second places penalties upon "fee-splitting." It is divided into three sections. The first defines the meaning of the term, "selling the patient." The second describes "buying the patient." And the third sets the penalty for either offense, which together are called "fee-splitting." It says, "Upon conviction he shall be fined for the first offense not less than \$50.00 nor more than \$100.00, and upon conviction of the second offense he shall forfeit his license," etc. This law is almost identical with the Alabama "fee-splitting" law, except that in a few places they

differ slightly in phraseology, and in the penalties inflicted.

The third prohibits untruthful advertising of all kinds. The offender "shall be fined in any sum not exceeding \$500.00, or imprisoned in the county jail not exceeding ninety days, or both so fined and imprisoned in the discretion of the jury."

And the fourth covers the sanitary production, hauling and storing of food products. It specifies proper lighting, drainage, plumbing, and ventilation of food factories and depots; the hygienic transportation of eatables; the cleanly and washable nature of the floors, walls, ceilings and sidewalls, etc.; the screening of buildings; the provision of adequate and convenient toilet rooms and lavatories with washable floors, to be scoured each day; the lavatories with towels convenient to the toilets; the provision of cuspidors for the use of employees, which receptacles are to be washed and treated with the disinfection solution each day; the prohibition of expectoration on floors or sidewalls where food is kept or handled; the classing as a misdemeanor the sleeping in a room with food in packages unhermetically sealed; the unlawfulness of permitting the employment in connection with food of anyone affected with a contagious or venereal disease; the labelling of condemned foods; the destruction of such when ordered; that the offender shall be punished by a fine of not less than ten dollars (\$10.00) nor more than one hundred dollars (\$100.00), or by imprisonment not to exceed 30 days, or by both fine and imprisonment, and for the second and subsequent offenses by a fine of not less than fifty dollars (\$50.00) nor more than two hundred dollars (\$200.00), or by imprisonment in the county jail for not more than ninety days, or both, in the discretion of the court," etc.

Kentucky may well be proud of what she has accomplished. We know of no other state in the Union that approaches her in progressive health legislation.

THE CARDUI TRIAL.

The poor unfortunates who call themselves doctors and are permitted by our lax laws to be so called, who have been the main reliance in the effort to prove that the ingredients of such a nostrum, either *carduus benedictus* or *viburnum prunifolium*, the worthlessness of which is now well known, is of *some*, however little, value in the treatment of some or any or all of the diseases peculiar to women, have little conception of the harm they have done, not alone to the profession they disgrace, but to women sick or ignorant enough to be misled by their advice. Such men cannot realize that the patent medicine people are relying upon them but little to support any actual misstatements they make; but that their evidence is really filed as exhibits to prove the venality, incompetence, and utter ineffectiveness of that proportion of the medical profession of which they are the unworthy representatives. We do not wish to be misunderstood as commenting on the character of any particular witness, medical or otherwise, in any libel suit pending in the courts, because it would be improper to do so in an orderly judicial procedure. We do wish to say, however, that a medical witness is either a fool, a knave, or both—or worse, who would state (in any other place than a Court, where “expert” license, as distinguished from the poetical variety, seems to be permitted by the code) that an alcoholic beverage, or the equivalent of 96 drops of whisky with a dash of bitters in it, would cure or relieve gonorrhea in women, and all the various misplacements of the uterus, including prolapsus, retroversion, anteversion, inversion, and the various flexions; and that such a nostrum should be taken by every young girl throughout the period of puberty and that it never could do them anything but good; that all newly married women should drink it for three or four doses each day; that it cures many cases of sterility; that it cures amenorrhea, even when caused by tuberculosis or malaria; that it cures menorrhagia and leucorrhea, and, at the same time, that it would not mask any of the early symptoms of cancer of the uterus; and it should be taken by every woman during the term of pregnancy, when it could never do any harm; and that it will make child-birth easier, and that it could do nothing but good if taken by every woman throughout the period of the menopause. And yet the evidence now appearing in the newspapers of Chicago, and in more detail in the *Journal of the American Medical Association*, and statements of the contents of many depositions filed in the suit, seems to indicate that nearly one hundred and fifty Southern physicians and a

score of professors in the lower grade Chicago medical schools, have been found who are willing to make some or all of the above statements under oath. Most of the Southern men belong to that innocent and ignorant class that were the half-baked members of poorly trained and taught classes in the low grade medical colleges we were forced to have in the South until quite recently. Many of them apparently earn what living they do make as patent medicine peddlers rather than as physicians. One cannot help feeling surprised and chagrined, however, that an occasional honest man has been found willing to appear and testify that he has suggested this and other nostrums to women of whose ailments neither he nor they knew anything, and that they had been cured by the nostrum of whose contents he was as ignorant as his evidence showed him to be of the condition for which he gave it.

What are we going to do about it?

What are you going to do about it?

First, as an organization, let us tighten up our reins a little; at the next meeting of each county society let us have a frank discussion about what each of us is doing, and let the line of cleavage be a little more clearly marked between the pharmacist and the doctor on the one hand, and the country storekeeper and the druggist who recommends patent medicines on the other. A man cannot serve both God and Mammon, and no competent doctor can sell or prescribe secret medical concoctions to sick people and remain within the pale of decency. No doctor can own and operate a drug store and sell patent or proprietary medicines with concealed ingredients to innocent and ignorant men and women and be permitted to retain his self-respect and that of his fellows. We can go much further than this and say that the time has arrived when no physician can continue to prescribe or dispense a medicine of the contents or action of which he is ignorant, and at the same time be a conscientious physician or an honest man.

Now, it is up to you, Doctor, as to whether you are to classify yourself as an honorable member of the greatest profession in the world, or to classify yourself amongst the vendors of nostrums, whether of the patent or proprietary variety, and outside of the pale of the scientific profession. If you belong to this latter class, please drop the title of “Doctor” from your name, and stop disgracing the profession which is lending you undeserved honor and standing. Let us close up the ranks and clean out the rascals, and if a little self-confession and self-correction is necessary in any one of us, let us do a radical operation now, and down here in the Grand

Old Commonwealth, at least, let us be honest with ourselves, our fellows, our patrons, and our God.

SCIENTIFIC EDITORIALS.

RADIOGRAPHY AND RADIOTHERAPY.

In a previous editorial on physical means as applied in the treatment of skin and malignant diseases, we laid especial stress on the X-rays as one of the best and most effective therapeutic agents if applied scientifically and intelligently. We said that as great as has been the application of X-rays to diagnosis, they are of equal and perhaps even of more importance in therapy.

While an insufficient method and faulty technique in radiography may not give a correct diagnosis, no great harm can be done as the radiographer may keep on trying until he can get some satisfactory diagnosis; it is different, though, when X-rays are used for therapy of diseases. A defective development of the method and insufficient knowledge of their mode of action may cause considerable damage to the patient.

Thus, we can see that not every radiologist is a radiotherapist. If a radiologist wants to give radiotherapy, he must use different methods in regard to the manner of administration, dosage and penetration. He must be well acquainted with the anatomy and pathology of the skin; its idiosyncrasies as to different reactions. It seems to us that dermatologists ought to make ideal radiotherapists.

With the wonderful development of the X-ray apparatus and the improvement in the make of X-ray tubes, the administration of X-rays to-day is as accurate as administration of medicaments. Their working doses and their maximal doses are known. According to the experiences of the best known X-ray therapists, a normal dose, as a unit dose, which is to be taken as a measure, the epilatory dose has been taken. By epilatory dose we mean that dose which produces a falling out of the hair of the head, without producing a noticeable erythema. The frequently used expression "erythema dose" is rather misleading, as it does not signify the accurate dose required. The term "erythema dose" was used by both radiographers and radiotherapists, for it was thought that X-ray action was purely caustic. Since it has been found that the X-rays have an inhibitive action instead of caustic, the method of their use has been changed. One would be astonished at the progress that has been made with the X-ray in diseases of the skin. Syccosis and herpes yield to one seance; trichophytosis (ringworm of the scalp) so inaccessible to the

most energetic chemical agents, when its principal seat is in the hair bulbs, is to-day, thanks to Sabouraud, simple to cure. It is the same with favus, alopecia areata, senile sebaceous acne (which often precedes epithelioma just as buccal psoriasis often precedes cancer in smokers), papilloma, angioma and rebellious cicatrices all yield to X-rays. It is very useful in lichenoid and pruriginous eczema, leucoplakia, mycosis fungoides and rhinophyma.

It also must not be forgotten that different diseases require different doses. In acne vulgaris, not indurated form, a dose of 2.5 m.a. of 2 to 3 minutes duration and $\frac{1}{4}$ 1-2 inch penetration is required for each cheek, forehead and chin, while the indurated form of acne requires a deeper penetrative dose, with a number one filter. In psoriasis broken doses are preferred to a long continued one, while in mycosis fungoides a superficial dose is grateful, for such a dose stops the intense pruritic condition. In sarcoma, both melanotic and multiple hemorrhagic with metastatic involvement deep filtered doses are better tolerated and are more useful. The same deep filtered doses may be applied in leukemia and pseudo-leukemia. In pruritus ani and scroti and labia and vulva mild doses are useful and filters should not be used. The dosage should be regulated according to the progress of the disease.

Besides the inhibitive action X-rays possess an elective and cytolytic activity on morbid tissue.

X-rays *per se*, are not germicidal, but indirectly, through tissue reaction they may produce such effects in a high degree, as shown by the partial or complete arrest of purulent discharge from the surface of carcinomatous or other ulcers subjected to their action. They produce degeneration in cells of embryonic type without destroying the healthy stroma in which they have developed; cells also of higher differentiation are affected early. As a consequence, hair follicles and sebaceous glands may become partially or wholly atrophied under the influence of the rays. the result depending upon the dosage employed.

With the newest types of interrupterless transformers, with the wonderful, almost perfect vacuum Coolidge tube, with the most accurate radiometers of Sabouraud-Noire, Myer and Corbett, and with aluminum filters, treatment can be administered as accurate as medication with drugs. The wonderful reliable Coolidge tube has no peer. Its ability to emit unlimited quantities of rays of very high penetration allows deep application of rays through thick filters. The Coolidge tube's greatest value to the dermatologist, however, is in the fact that it may be regulated to any

degree of penetration and this can be done with absolute certainty and regularity throughout a treatment of any duration.

Since X-rays can be given now in the most scientific way, since the quantity, the quality and the penetration of rays can accurately be ascertained, any intelligent physician can do radiotherapy if he can master the anatomy and the pathology of the skin and its different reactions to light emanations. We must not forget that the former methods of treating different diseases with many fractional and uncertain doses of X-rays were inadequate. It is now possible to treat and accomplish a cure with one or two doses of massive X-rays of any penetration desirable. Trichophyton or ringworm of the scalp does not require more than one or two doses of massive X-rays. The number of treatments for malignant growths has been greatly reduced by the new method of giving intensive doses. However, with all the new methods available the radiotherapist must be cautious and observant, no matter how experienced he may consider himself.

M. L. RAVITCH and S. A. STEINBERG.

PREPAREDNESS.

The problem of the preservation of life and the prevention of mortality in children under one year of age is somewhat different from that which presents itself when the children have survived the first year of life. In the study of the causes of the deaths of infants in childhood we obtain certain definite lines along which the attack must be made. Statistics compiled by Dr. W. C. Woodward have divided the causes of death in children under a year of age in their relative order as follows: The diseases of early infancy which include premature birth, congenital debility and other conditions due to early infancy are responsible for 33.16 percentage of deaths; next to these come the diseases of the digestive system which answer for 27.12 percentage of deaths; following these are the diseases of the respiratory system to which may be attributed 15.85 percentage; while the general diseases explain 9.48, the remaining 14 per cent. embraces malformation, diseases of the nervous system and various other conditions. Here we have very definite information from which to found our prophylaxis in preventive treatment. When the statistics are compiled for ages up to five years we shall find that the percentage will change considerably as the deaths due to the respiratory system, as well as the general diseases, become greatly increased in later childhood. For the present, however, it is important to remember that the digestive system is the most vulnerable part

of the constitution that is within the range of our treatment, for premature births and congenital debility are as yet to a large extent beyond our control, the causes of which lie in the realm of prenatal care and prophylaxis. We must feel the responsibility of maintaining in active health a child which has been born at full time and in a normal condition. The battle which this child will have to fight will be principally the mis-management of its digestive system.

There is no doubt that many of the deaths due to the respiratory system will be found also to have in a large measure been due to the accompanying disease of the digestive system.

Our care of the new born child, then, should have in mind especially the handling of the digestive system, and the prevention of its derangement, as far as possible. There would be necessary first, then, a thorough understanding of the problem of infant feeding. Fortunate is the mother who can nurse her own baby and who escapes the many experiments with the baby's digestive capacity. Statistics show us that the child on the bottle has only one-eighth the chance of living that a breast-fed child would have, and yet many physicians, for the most trivial causes, deny the child its right to mother's milk and put into the child's stomach some one of the great number of foods which have been recommended by some inexperienced neighbor. The desperateness and gullibility of the average mother who attempts to feed the child on some other than the natural food is only equaled by the helplessness of many doctors who do not think of food with the same care with which they would examine into the merits of a drug treatment.

Granting that the food has been selected and adapted to the child's digestion, the high mortality in its digestive system would make us take all possible precaution against the development of any disease. And this should be within our power because it is the result of the introduction of material which would produce an irritation to the mucous membrane of the bowel. So long as the food is pure and wholesome and perfectly adapted to the child there should be no derangement of the bowel, and when such derangement occurs it must be due to lack of care in handling or administration of the food. Absolute cleanliness coupled with regularity, and good judgment will prevent diarrheal diseases. Absolute cleanliness is difficult of attainment but the pasteurization of the milk with the prompt cooling of the milk and the maintenance of its low temperature with bottles and nipples that are sterile are conditions that are obtainable by any mother in ordinary circumstances. It may not be possible in many places to se-

cure very clean milk, but if it is pasteurized promptly the pathogenic organisms will be destroyed. Regularity is important because the proper function of the secretion is conditioned by the regularity of the stimulus, and children are not able to adapt themselves so quickly or so well as adults are. In fact, it should be possible to have perfect regularity in all functions of the young child, eating, sleeping, bathing, etc. Good judgment is a commodity that is not purchasable and cannot always be attained by the patients even if they have a good doctor, but there are certain simple basic truths which should be lived up to. When a child has little or no appetite the food should be withdrawn until the cause is removed, instead of which most people make extra efforts to put more food into the child. Any derangement of the bowel will call for starvation and the free administration of water until the equilibrium has been established. When the weather turns suddenly hot more water and less food should be given, the food weakened and extra precautions taken against infection of the milk. It is wise not to make any sudden change in the food at the time when the teeth are being erupted. In fact one might paraphrase Hoyle, "when in doubt practice starvation"; for there are more children who die of overfeeding than those who die from insufficient feeding.

PHILIP F. BARBOUR.

Wire Nails in Joint Fractures.—Ernest F. Robinson (Jour. Missouri State Medical Association) advocates ordinary wire nails to retain the fragments in fractures in and around joints. Nails are preferred to the Lane plate because it is difficult to get a level surface for the application of a plate and the screws are liable to loosen in the soft, spongy fragments, while bone pegs, transplants and inlays are never firm or secure in the spongy bone. The nails may be withdrawn in from five to six weeks, especially in children, to prevent interference with bone growth, though in adults it is not absolutely necessary to remove them.

Pain in Breast Cancer.—Pain has been looked upon as a valuable symptom, particularly as applied to tumors of the breast, but it is most misleading. Up to the point of cell degeneration and breaking down of tissue or where there is pronounced pressure upon adjacent structures, cancer, in its early stage, is not painful. Rodman says that rarely, if ever, does cancer of the breast become painful the first year. If we wait for pain to develop often the day of salvation is past.—J. S. Rardon, in The Ohio State Medical Journal.

ORIGINAL ARTICLES

UREMIA.*

By H. K. ORSBURN, Owensboro.

Uremia is a toxemia occurring as the result of acute and chronic nephritis and anuria, the exact nature of which is not positively known. The most striking symptoms grow out of the effect of retained poisons upon the nervous system.

Two theories regarding the cause of uremia prevail. One is that it is the accumulation of nitrogenous products in the blood which should be thrown off by the kidneys. Another is that uremia depends on the products of abnormal metabolism in the liver. The metabolic theory is not generally accepted by the profession, but to my mind it is clearly a cause. Persistent and excessive diarrhoea, brought on by the excessive use of drugs is, occasionally, where it deranges metabolism, a cause. Diarrhoea induced by severe fright will, in the same way, disturb metabolism and lead to this condition.

Great stress has been laid upon urea, uric acid and the urates, but it is now conceded by many that the importance of these products in this connection has been exaggerated.

There are three types of uremia; acute, chronic, and latent. The acute type may develop in any form of nephritis. It is most common as a sequence of the acute infectious diseases. Chronic uremia occurs most frequently in the arterio-sclerotic and granular kidney. The latent form shows itself in renal calculi, in which fragments of stone block both ureters; in fevers and inflammations; in acute drug poisoning, as by phosphorus, lead and turpentine; in collapse after injuries and operations, or after passing the catheter; after profoundly depressing infectious diseases, as yellow fever and cholera; and in hysteria.

In acute uremia the renal symptoms usually appear suddenly or rapidly. If of slow or gradual development the nervous system becomes somewhat habituated or tolerant of the poisons, and the symptoms are those of chronic uremia. Acute uremia is characterized by severe headache, persistent nausea and vomiting and diarrhoea, which is sometimes due to severe colitis, and by convulsions, coma, or both together, which may develop suddenly. These two latter symptoms may develop without premonition, or they may be preceded by some of the phenomena of chronic uremia. Convulsions rarely occur without coma, although the latter is sometimes not deep. Coma without convulsions is of much more frequent occurrence. In most

*Read before the Daviess County Medical Society.

cases stupor or unconsciousness exists in the intervals between the convulsive seizures. There is considerable variation in the severity of the convulsions. They may be limited to slight twitching or may be violent generalized movements and may cause death by interference with respiration. Coma generally begins with drowsiness and deepens into stupor and unconsciousness, or it may be deep from the start. The pulse and temperature are commonly unchanged. The pupils may be large, small, or normal.

In chronic uremia we have periodical headaches; loss of appetite, nausea and vomiting, or diarrhoea; respiratory disturbances, such as asthma and Cheyne Stokes' respiration, sudden temporary blindness or deafness, numbness and tingling; occasional muttering or maniacal delusion. Headache and dyspnoea are often constant. Usually the total quantity of urine voided is diminished, but in chronic interstitial nephritis it may exceed the normal average, although the excretion of waste is diminished. The condition of the kidneys alone rarely produces the intoxication. There is also congestion and slight enlargement of the liver and unwholesome fermentation of the contents of the alimentary tract which helps to cause it.

In chronic interstitial nephritis we have the antecedent symptoms of hypertrophy of the heart, increase in blood pressure, and often beginning atheromatous degeneration of the arteries, as a concomitant of uremia.

In order to prevent suppression of urine the cause must be removed. Since renal congestion and inflammation are especially apt to occur in infectious disease the skin should be protected against sudden chilling by woolen garments and warm clothing. Attention should be directed to this especially during convalescence from these diseases. During convalescence from these diseases which are oftenest complicated by nephritis and uremia, as scarlet fever and diphtheria, the patients should be kept unusually long in bed in one room. The skin should be kept clean by frequent bathing. The mouth and nasopharynx should be cleansed to prevent toxic matter from being absorbed from them. The bowels must be emptied regularly and freely, since the toxins which produce uremia are derived chiefly from the intestinal tract. Foods which easily ferment must be avoided, as well as alcohol, which irritates the urinary channels.

When albumen is present in the urine and uremia threatens, food, if it must be taken, should consist exclusively of milk. If uremia exists in a mild form, abstinence from food for a short while, or even one or two days, if the patient is sufficiently vigorous, the use

of water freely, and a prompt, copious purge will often cause all traces of the malady to disappear. So long as uremic symptoms exist albuminous food should be withheld. Some days after the uremic symptoms have subsided and after a copious excretion of a fairly normal urine has occurred, meat, fish, and eggs may be given. As a milk diet is not well tolerated by many patients, it may be varied by the use of farinaceous foods and fruits. Even when such articles are allowed, milk should form the chief ingredient of the diet. It often happens that in sufficiently strong patients, complete abstinence from food for one or two days with copious bowel movements, will relieve mild uremia. In these cases all gastric and respiratory distress is relieved for the time.

When uremia exists, complete rest should be had, but when not present, gentle exercise should be taken to promote more perfect metabolism and help to eliminate from the tissues the products of their own waste. For those who are too feeble to take active exercise massage and passive movements must sometimes be prescribed. But exercise should never be exhausting or very fatiguing.

If renal congestion cause either acute or chronic uremia it should be lessened by bleeding whenever the patient is strong. If the uremia is mild deplete by the intestines and cardiac tonics. When nephritis exists keep the renal tubules as nearly permeable as possible.

The stomach and intestines must be kept clean by the use of saline cathartics and fermentation in them must be lessened. They should be given in concentrated form when the stomach is empty, and no fluid should be taken until they have acted. The occasional use of calomel generally has good effect. It is both an intestinal antiseptic and diuretic. During the first day or two of severe uremia a drastic purge with elaterium gives the best results; then keep the bowels clean and moderately depleted by salines.

It is quite as necessary to eliminate by the skin as by the bowel. To promote as vigorous action as possible heat should be applied to it. Patients with chronic uremia who are still fairly strong generally prefer a hot bath. They should be immersed in water as hot as can be borne for fifteen or twenty minutes. After leaving the water they should be rapidly dried, briskly rubbed, and put at once to bed under woolen blankets, and warm bed-clothing, in order to maintain diaphoresis for sometime longer. These baths may be repeated daily, or at longer intervals, as necessary. If the patient is too feeble to be taken from bed or in a comatose condition a hot air bath or hot pack is best.

I have at times seen the good effects of pilocarpine when the case was urgent and the heart strong. When given hypodermically in one-sixth to one-eighth grain doses it produced free diaphoresis.

The skin should be kept active and clean even if actual sweating is not necessary. This is best accomplished by gently rubbing and then taking a warm plunge or sponge bath. These may be taken every day or two.

In Cheyne-Stokes' respiration and asthma we may give, besides the foregoing treatment, full doses of bromide of sodium. Nitrite of sodium and nitroglycerine may be given in medium doses with good effect in these diseases.

Sick stomach and vomiting, when the patients strength will permit, is most readily controlled by abstinence from food for a short time, and drinking an abundance of water, and free catharsis. An opiate, paregoric or morphine, in small doses will sometimes lessen the irritability of the stomach. It should be used with caution, however, as it lessens the excretion from the kidneys and increases the danger of profound anemia.

Persistent diarrhoea is, in many cases, an effort of nature to get rid of uremic poisons and should not be checked unless it becomes exhausting. In that case it should be controlled by astringents when possible. If these fail and opium is employed it should be used with extreme caution.

In deep congestion of the meninges and if maniacal symptoms are prominent, bleeding is beneficial. This may be accomplished by opening a vein or by applying leeches behind the ears. It does good by withdrawing both poison from the system and blood from the brain. Veratrum and aconite also help by relaxing the peripheral arterioles.

Medical Ethics.—Good ethics, then, is to be found among surgeons who, following the teaching of Hippocrates and Aristotle, of Celsus and Galen, maintain that he is the upright scientist who pursues his art by the light of sound reason; who draws his conclusions and guides his practice by deductions founded on accurate observation, who observes that clear inductive method which is older than history; who abhors exaggeration and pretence; who practices square dealing; who conducts himself toward his fellow and toward the public as a generous and honorable man.—James G. Munford, Clifton Medical Bulletin.

ABDOMINAL PAIN.*

By OSCAR E. BLOCH, Louisville.

A correct medical history of the patient is essential to an attempt at diagnosis of the cause of abdominal pain. For convenience of consideration, I will refer to the division of the abdomen into upper and lower right and left quadrants.

The character of pain varies from the most intense to a mildness which is often expressed by the patient as a "misery," it may be constant or recurring. These characteristics associated with certain other symptoms and signs assist in coming to a conclusion as to its cause.

It is well to recognize that abdominal pain may have causes without the abdomen, as well as within.

Among the extra abdominal causes, crises in locomotor ataxia are common and it requires only a bit of notice paid to the patient's history, to his pupils and his knee-jerks to prove or to eliminate this factor from the diagnosis. Judging from recent surgical literature, not a few abdominal operations have been performed in an attempt to relieve a patient suffering with locomotor ataxia.

That caries of the spinal vertebrae produces pain in the abdomen should be remembered, and examination for tenderness over the spine should be carried out as a routine measure.

Pneumonia, pleurisy and even pericarditis, often give symptoms of pain in the upper abdomen. Hysteria often manifests itself by great abdominal pain; usually, the patient is a nervous person, with great fear of the surgeon, in whose circle of friends or acquaintances, an operation for a similar pain has been recently performed.

My experience along this line has certainly not been unique, and I have been called to see many supposed appendicitis patients in families upon some of whose members I had just operated for appendicitis. These sufferers experience immediate relief when told that they have not got the feared disease.

I recall a typical case of ruptured tubal pregnancy in a woman, whose neighbor had a few days previously undergone an operation for this condition. The pain was intense; the collapse complete and the diagnosis of hysteria could only be made after the patient had been anesthetized, and an examination made, all preparations for immediate operation having been completed.

Epigastric and umbilical hernia and separation of the recti muscles are to be regarded as possible external causes of abdominal pain.

*Read before the Jefferson County Medical Society.

A small epigastric hernia is very easily overlooked; the pain associated with it is very similar to that of gall stone colic.

As a routine in abdominal examination, I have the recumbent patient raise the head from the bed, thus making the recti muscles tense and making evident to inspection and palpation any abnormality in the middle abdominal line.

Trauma is the most common external cause. Gun shot wounds do not cause as much pain as would be thought natural for the amount of damage done, or proportionate to the amount of shock and muscular rigidity.

I closed fourteen intestinal perforations in a man, resulting from a pistol wound, and he complained of practically no pain, although the evidence of shock and the muscular rigidity was great.

In another man who had been shot in the back, the ball did not enter the abdomen at all, but the pain was so great that I would have opened his abdomen, had it not been for an X-ray picture which showed the ball lodged in the anterior abdominal wall.

I have seen many contusions of the abdomen where it was very difficult to make out whether intra-abdominal damage had been done.

Great dependence must be placed in the amount of shock and character of pain and in dullness upon percussion over those regions where free blood would gravitate.

I will tell you of two contrasting cases to illustrate how nearly impossible it is to tell the amount of damage done.

A, was a negro teamster who had been struck in the upper right quadrant by the tongue of a wagon; there was no evidence of external injury. The pain was always located by the patient at the same point. Pulse good but his expression was that of shock. No sign of hemorrhage could be made out in the loin. He was seen by me one hour after the injury and was seen every hour or so by his attending physician, who considered his general condition improving, although his complaint of pain was constant. Operation was not performed and this man died within twenty-four hours. Post-mortem examination showed a mesenteric rupture and one of the small gut.

With this fresh in mind, I saw B, a small boy, age 10 years, who had been struck in the left side by the fender of a moving automobile. Shock was profound; pulse barely perceptible. He spat and vomited blood. He pointed to a painful area in his left upper quadrant. Over the base of his left lung, upon both inspiration and expiration a flapping, gurgling sound was heard. Dullness in the left flank seemed present. Operation was refused by

the family, and the lad made an uninterrupted and speedy recovery.

Poisons as a cause of abdominal pain can be readily classified as extra or intra-abdominal. One of the commonest of these pains is lead colic; here a complete history of the patient helps to confirm a diagnosis, often made by the sight of the blue line on the gums; of course, the gums of artificial teeth are not to be accepted as *prima facie* evidence.

A friend recently told me of a relative submitting to operation in a nearby city; the family doctor diagnosed appendicitis; the surgeon, gall stones and the roentgenologist, ulcer of the stomach. All of them were correct, for all of these conditions were found. I relate this as an instructive instance in which a combined pathology produced such interlocking of symptoms that different men with different diagnostic methods, and from different view points, came to different conclusions.

The great public places utmost confidence in the revelations of the improved fluoroscopic methods, but the medical man must remember that the knowledge thus obtained must be collated with other information to be gotten from the patient's history, from inspection, palpation and percussion; from the character of the pain, and its relation to the ordinary events of life, such as eating, urination and defecation. Inquiry must be made as to whether the pain is more severe by night or day, standing, sitting or lying, on the back, or one side. The laboratory must also be brought into service, for much information is to be obtained from a thorough examination, chemically and microscopically of the stomach contents and of the feces and by a blood count. After exhausting all of these methods it is often impossible to come to a satisfactory conclusion.

We are not often confronted by the typical cases which are related by our text books. As an example, an inflamed appendix most frequently exhibits its beginning pain at the umbilicus or in the epigastrium, in fact the pain of the developed appendicitis depends upon the direction of the tip of the appendix or upon its adhesion to some other organ. I have removed an appendix where the symptoms were practically those of a renal colic. In this case the appendix was adherent to the posterior peritoneum at the point where the ureter passed over the brim of the pelvis.

One could write chapters upon chapters about the vagaries of the appendix, but I will only direct your attention to the well known fact that typhoid fever does, sometimes, begin with localized pain similar to that of appendicitis. I was saved the embarrassment of an operation in such a case of typhoid fever,

early in my career, by the advice of a kindly consultant.

The presence of tumors in the abdomen materially assist in clearing a diagnosis as to the cause of pain.

Now, a few general statements before I conclude.

A sudden, intense pain accompanied by collapse, and muscular rigidity usually indicates the perforation of some organ, if in the upper abdomen, it is usually a perforated gastric or duodenal ulcer or a gall bladder.

Acute pancreatitis, either suppurative or hemorrhagic and acute intestinal obstruction may cause precisely the same symptoms. The intense pain, the nausea or vomiting, the collapse and the muscular rigidity; the symptoms of collapse in the last mentioned conditions are not so marked as in the perforations named, and a little time may be taken for examination of urine and stool which will prove of advantage in advancing to a correct diagnosis. If in the lower abdomen, diagnosis lies between the appendix and a ruptured tubal pregnancy.

Mesenteric thrombosis should be considered as a possible cause of abdominal pain, especially in patients with endocardial involvement or with hardening of the arteries. The symptoms are those of acute intestinal obstruction, except the pain is possibly more sudden.

I have operated upon one such case with recovery. An old man was seized with a sudden intense pain in the left middle abdomen while transferring in an omnibus from train to train. He was taken to the hospital and his pain relieved by morphine.

In a few hours, the pain recurred, accompanied by sweating and weak pulse; the relief afforded by the morphine was again satisfactory but fleeting. His abdomen was opened through the left rectus and the only pathology found consisted of small hemorrhages in mesenteric loop of the small intestine. He had no return of the pain after the operation, the hemorrhages seemingly ceased with the handling and replacement of the intestines and his recovery, although not smooth, was complete.

The patient from whom this specimen was removed was a married woman, age 38, with the following history; an operation, three years ago, for appendiceal abscess; drainage continued three weeks, with a stormy recovery. She presented herself June, 1915, with a very large hernia at the site of the operation.

Operation was performed at St. Joseph's Infirmary on June 12, 1915. When the incision reached the peritoneal cavity, the contents of the hernia appeared to consist of two-thirds of all of the intestines. The appendix was

found with very little trouble; beginning at the base the appendix was completely atrophied and the lumen destroyed and continued as a fibrous band about one inch in length. At the distal extremity of this band, cystic development of the tip of the appendix was found.

Although McCosh, in his article on Inflammatory and Other Diseases of the Vermiform Appendix in the 1910 edition of the American Practice of Surgery, says one or perhaps two cystic appendices are ordinarily found in every 100 cases, this was my first encounter with this condition. McCosh further says that these cysts nearly always result from previous inflammation and that they vary much in size, from the cyst which is not very much larger than the normal appendix, to the cysts which are as large as an orange.

SOME OF THE USES AND ABUSES OF THE OBSTETRIC FORCEPS.*

By I. J. HOOVER, Owensboro.

When asked by our worthy secretary to read a paper before this society I began to think—upon what subject I should write. After some study this thought presented itself—"it makes but little difference just so a paper is written in such a manner and upon such a subject that furnishes food for a general discussion." Therefore I selected this subject, "Some of the Uses and Abuses of the Obstetric Forceps."

We know the needs of the obstetric forceps are many and this seemed to be, at least, partially realized by our early pre-obstetricians, for several varieties of forceps had been described by Albusasis, who died in 1112. But as their cephalic side contained long teeth we know they were intended for use only where the child was dead, while we now know the forcep is seldom used in such a case. Realizing that such a forcep was practically worthless, especially where the proper instrument is needed, there seemed to be but little done as to the correcting of such a forcep until the latter part of the thirteenth, or the beginning of the fourteenth century, when a member of the Chamberlen family seemed to partially grasp the idea of the correct forcep and evidently knew some of the uses. For we know he had in his possession a forcep with marked improvements over the first one invented, and that he kept this invention from the medical profession for four generations or late into the seventeenth century, and all this time, he and his descendants were using, and no doubt abusing, this forcep by attempting to demon-

*Read before the Daviess County Medical Society.

strate to the laity they could deliver a woman where other doctors fail.

It was not until the seventeenth century this secreted invention became generally known to the medical profession, therefore the perfection of the forcep was diligently being sought until the date of the double curved axis-traction, when now no obstetrician would feel that his list of obstetric instruments is complete without this forcep. And too, I shall say, the doctor who is employed or engaged to attend any woman during her confinement, if he has not previously attended her, and sits idly by and awaits the call when his presence is needed, without first ascertaining as thoroughly as possible her past history relative to diseases, injuries, deliveries or miscarriages and accurately taken her pelvic measurements with a pelvimeter, especially if this be a primipara or there be anything in her history that could lead one to suspect a deformed pelvis exists, is making a far greater error than where he fails to give any instructions as to her diet, condition of bowels, manner of living or failed to make a complete urinalysis, and who of us would today feel that we are doing even second-class obstetrics where the latter precautions have not been observed.

I fully believe that as many of our operative cases, so far as the child is concerned, can and would be more accurately diagnosed before labor begins should these duties be thoroughly performed than are properly made at the bedside where the above mentioned have not been observed.

Most of our text books on obstetrics will tell us the forceps may be used as a tractor, a rotator, a compressor, a dilator or an irritator, but used as a tractor most frequently, and no doubt if we are to judge from our past experience in our own cases as well as when in consultation we would be forced into the conclusion that the operator had forgotten there were any other uses other than that of a tractor. For we have seen the head dragged through, *not lifted over*, the perineum by the operator seizing the forcep handles with both hands bracing his foot against the bed or some immovable brace throwing his entire weight to help the lacking *cis-a-tergo*, or overcome a mechanical or pelvic obstruction or an over-sized head. Instead of the operator using only traction with the forearms and constantly keeping in mind the location of the points of the forceps, pelvic obstructions, especially the perineum, and last but not least the fact he is pulling on a live child and against a living mother; but used as a rotator much more seldom, in fact we seldom think of them as a rotator, except in persistent occiput posterior position in

the primipara or the most rigid perineii of the multipara, and then Dr. G. L. Broadhead, of New York, says before rotation with the forceps is undertaken the following should be fulfilled: "First the head should be as well flexed as possible; second the vertex should be well down in the pelvis, preferably at the vulvar outlet; third the membranes must be ruptured; fourth, the cervix should be fully dilated or dilatable; fifth, the bladder and rectum should be empty; sixth, last but not least, the operator should be sure of his diagnosis of the position;" as a compressor occasionally, usually where the occiput is partially under the pubic arch; as a dilator only where immediate delivery is imperative for the safety of either mother or child; as a lever very seldom, if ever; and as an irritator I believe never.

Most of us condemn the "old midwife" and justly so, when we know she, when called to attend a woman in confinement, makes one or more, commonly many, vaginal examinations merely to find out the amount of cervical dilatation, and paying no attention whatever to pelvic deformity or internal pelvimetry, and as she would say "merely seeing the progress the patient is making." Then are we not doing exactly the same when we fail to carry out the before-mentioned duties and precautions and not merely sit and, as the mid-wife, would say, I always believed in nature taking her course, when at least we are chagrined to discover that the woman is not going to deliver herself, when we then have to notify the anxious family that we will have to take the child with instruments which is the only way to save the child, and at this we are not sure the child will be saved, but will do our best, though we have not studied the case until the last minute and then with only one operation in view—the forceps; while we have Cesarean section, hebotomy or podalic version, either of which in some cases furnishes many chances for a living baby. But on the other hand there are many indications for the use of forceps, some of which are as follows: First, if the head is engaged in the pelvis, without any progress and the patient having good pains, for two hours, or if the head is on the perineum for one hour; Second, if the foetal heart drops to 100 or increases to 160; third, where the mother has pulmonary congestion when the child's head is engaged with complete dilatation of the cervix; fourth, where we have uterine inertia with complete dilatation of the cervix and the head engaged and stimulants having failed to increase uterine contraction; fifth, in persistent occiput posterior position where we have failed to rotate the occiput to an anterior position and the head engaged. While these are

a few of the indications for the forceps the following should be observed before the forceps are applied: See that the cervix is fully dilated or very dilatable, the membranes ruptured, a vertex presentation, and the patient completely anesthetized.

I shall name only a few of what I consider contraindications for the use of forceps: First, where the conjugate vera is less than 7.5 cm., unless we can determine that the child is far below the average in size; second, most every time where the head floats above the pelvic brim; third, where we know there is an unusually large head, i.e., out of proportion to the true conjugate of the pelvis; fourth, where the child is dead and spontaneous delivery seems impossible; fifth, on the after coming head in breech cases where the head has been retained until we know there is no chance of life in the child; sixth, where the cervix is not fully dilated or very dilatable.

One author consulted claims that before the invention of axis-traction forceps there was one forcep operation in each 1,000 deliveries, while now by the skilfulness of the obstetrician the use of the pelvimeter as well as the other valuable instruments for making correct diagnoses and the superior advantages of the axis traction forceps we now have one forceps case in every 17 to 35 deliveries. Thus we can readily see the uses of the forceps are numerous and without carefully studying our cases both before and after labor begins, any instrument with so many uses will no doubt, like the much lamented pituitrin, have many abuses.

I know the lives of many children as well as of many mothers, have been saved by this valuable instrument, to say nothing of the long hours of intense suffering saved the mother by the judicious use of this, to me, most valuable instrument—the forceps. But in conclusion, without summarizing, I shall insist upon a thorough examination together with mensuration before labor begins as well as a careful examination after the onset of labor and before forceps is applied, and being thoroughly convinced that the forceps is the operation that entails the least risk of injury to both mother and child.

Seventy-six out of eighty-seven cases of typhoid fever which occurred in a recent outbreak have been traced by the United States Public Health Service to infected milk. Had the first cases been reported to a trained health officer the outbreak could have been stamped out promptly. When will we learn that disease prevention is sure and cheap?

REPORT OF CARCINOMATA OF THE BREAST WITH A METASTASIS TO LIVER AND PRESENTATION OF SPECIMEN.*

By A. J. DAVIDSON, Lakeland.

Patient, woman; age, 61; unmarried; occupation, seamstress. Born in Switzerland. Lived in this country thirty-two years.

Family History. Father dead, old age; mother dead; aunt died in an asylum; a brother and sister died in childhood, cause of death, unknown. A sister, age unknown, died of paralysis. Maternal grandmother died of cancer of breast. One sister died of cancer of uterus. One sister still living and in good health.

Personal and Present History as obtained on December 8, 1915: Had scarlet fever when a child. In 1904, was admitted to asylum suffering from melancholia with some suicidal tendencies, and had been in asylum since this date. Had been a quiet trustful patient for most of this time with occasional outbreaks of despondency or excitement. Physical examination showed pulse 84; blood pressure 110; heart and lungs negative; urine negative, sleep and nutrition very good; no pain in back of abdomen or chest and these regions; on examination by Dr. E. O. Grant and myself no growth or enlargement or tenderness found.

In upper inner quadrant of left breast a tumor the size of a hen egg found. Not adherent to skin or underlying muscle. Nipple retracted. The glands of left axilla much enlarged and indurated. Supra clavicular not palpable. This patient was first seen by me about November 10, 1915. Complained at that time and subsequently of sharp sudden pain in breast. Gave no history of injury and duration of disease indefinite.

Rodman's operation for removal of breast performed by Dr. E. O. Grant on December 15, 1915. Patient's convalescence was uneventful, but slow. Wound entirely healed by January 5, 1916. After this date patient ate fairly well and gained in strength. She began to fail about February 10th. and examination showed enlargement of liver. On February 18th, sclera observed to be yellowish. February 21st, an intense jaundice was present and patient gradually succumbed, dying March 12, 1916.

The specimen shown consists of liver, stomach, six inches of duodenum and pancreas, which weigh eight pounds. The liver extended from the 4th rib on right side; fifth rib on

*Read before the Jefferson County Medical Society.

left side, to line drawn across abdomen at the level of umbilicus. Liver is studded with cancerous nodules and main body of tumor situated in middle and lower anterior portion of liver and has lying underneath it the gall bladder which contains some bile that cannot be forced out. There is a hard mass the size of a pigeon egg in connection with common duct. The stomach and pancreas and duodenum appear free of the disease, although there is a large indurated gland in the mesogastrium.

Dr. Moore, pathologist, says part to be most likely involved first here is the bile ducts. There was no recurrence of tumor at operative wound site.

SOME CARDIO-VASCULAR STIMULANTS AND THEIR USES.*

By FRITZ C. ASKENSTEDT, Louisville.

The scientific application of drugs to disease involves three factors: (1) A proper recognition of the disease, its symptoms and their meaning; (2) a knowledge of the normal action of the drug to be employed; (3) accurate clinical observations of results. The first and second without the third would be but theory; the first and third, without the second, pure empiricism. Applying this consideration to the therapeutics of cardio-vascular disease, it is the purpose of this paper to present factor 3—accurate clinical observations of results—in the dawning light of modern clinical research, insufficient and unsatisfactory though it be.

It has been definitely demonstrated in the experimental laboratory that certain drugs have an elective affinity, not only for the cardiac muscle, as distinct from other muscular tissues, but that this affinity manifests a remarkable power of differentiation between the various structures of the nervous system regulating the function of the heart. Thus aconite and veratrum have been found to retard the heart action by stimulating the vagus center; while nicotine and coniine by paralyzing the ganglion cells around which the vagus arborizes, or atropine by paralyzing the nerve endings of these ganglion cells, or ergot by stimulating the nerve endings of the sympathetic system, are known to accelerate the cardiac function. This affinity of drugs for certain cardiac structures is, however, relative rather than absolute, for strictly speaking, every drug in sufficient dosage affects every tissue in the body to a greater or less extent, and the individuality of drug action depends upon which structure or structures it attacks with greatest intensity. That the

action of a drug upon one part may be directly opposed by its action upon another is shown by digitalis, which by stimulating the inhibitory nerves, the vagus, tends to reduce the force of the contractions of the ventricle, but this tendency may actually be overcome and the heart beats invigorated by a predominating stimulation of the myocardium by the drug.

To afford a brief review of the normal action of some of our most commonly used heart remedies the following chart is arranged to show, in an abbreviated schedule form, their best known effects upon the cardio-vascular mechanism:

	Myocardium	Cardio-Inhibitory System	Cardio-Accelerator System	Vasomotor System
Acids	D			DC
Aconite	S, TD	SC, TDC		S & DC
Ammonia			SC	
Amyl nitrite	S(?)	DC		D powerfully
Adrenaline		SC indirectly	SE	SE powerfully except lungs, heart & brain.
Atropine	D	SC & DE		SC, both constrictor and dilator.
Camphor	D(?)			DE(?)
Caffeine	S	SC		SC
Coniine		S & DE		SC
Digitalis	S	SC & E		SC
Ergot			SE & TDE	SC slightly
Opium		SC		SC, indirectly
Nicotine	S & D	S & DE		SE powerfully
Nitroglycerine		DC		D
Potash Salts	D			D
Sodium Salts			S	
Veratrum vir.	S	SC & TDE		S & DE

The possible uses of cardiac remedies are three-fold: (a) Stimulation—to support the circulating media, the blood and the lymph, at the rate of flow necessary for proper exchange by the tissues of nutriment and waste; (b) sedation—to conserve the vital energy of the heart against useless expenditures; (c) irritation—in the sense of directly and favorably influencing the nutrition and growth of the cells.

As has been shown, these powers may, one and all, be exhibited by a single remedy in moderate doses, and its selection must be based on a careful individualization both of the patient and of the drug. In a case of sudden collapse of heart power, especially if provoked through reflex action, pure stimulation may prove a most satisfactory procedure; while in another, the myocardium being seriously involved in fatty degeneration, continued cardiac stimulation may result in complete exhaustion or even rupture. It seems a most reasonable inference that in chronic heart disease with failing compensation a drug which acts directly upon the heart fibres like digitalis, should prove the most effective remedy.

Long experience has convinced me of the power of the carefully selected homeopathic remedy to stimulate the reactive processes of metabolism, but in this paper my statements

*Read before the Jefferson County Medical Society.

will be confined to the action of drugs in physiological doses. Space forbids me to include more than a few common cardio-vascular stimulants.

DIGITALIS

The action of this drug, properly known as the King of heart remedies, is exerted on the vagus center and on the myocardium, both of which it stimulates. An increase in the irritability of the cardiac muscle is a pronounced effect.

In therapeutic doses the stimulation by digitalis of the inhibitory center tends to lessen the number of heart beats and to weaken the systole by increasing the relaxation of the muscle fibres, while the stimulation of the myocardium is directly opposing this inhibitory action by increasing the tone of the muscle fibres and invigorating the systoles. The resultant action is usually a prolongation, more or less evident, of the cardiac rhythm (vagus stimulation), and a more complete contraction of the ventricles, with an augmented output (myocardial stimulation), for normally the ventricle does not completely empty itself during systole. The increase in the systolic output is especially marked when the ventricles are dilated.

If the administration of the drug is pushed beyond the therapeutic effect, which is dependent upon individual susceptibility as well as upon dosage, either the inhibitory action becomes markedly predominant as manifested by a very slow pulse (40 to 50 per minute), sinus irregularity, feeble ventricular contraction, and sometimes heart block; or, what is more frequently observed, the myocardial stimulation prevails, enhanced by the increased irritability of the fibres, and the heart action is quickened, the auriculo-ventricular rhythm interrupted, extra-systoles and fibrillation result, and instead of an augmented output of the heart, circulation becomes much impeded. In the quadrupeds digitalis manifests a decided stimulation of the vaso-motor center, with rise of blood pressure, but in man this effect is so feeble and uncertain as to be wholly negligible. Clinically, under the administration of digitalis a high blood pressure is often seen to fall progressively as the circulation improves, probably as a result of increased elimination, and we have now come to disregard a high arterial tension as a contra-indication to the use of the drug.

The extensive therapeutic employment of digitalis and its relatively greater uniformity of action have resulted in more well defined indications and contra-indications for its use than has been given any other heart remedy.

Its principal uses may be summed up under two heads:

(a). Auricular fibrillation.

(b). Diminished tonicity.

Auricular Fibrillation. The therapeutic effect of digitalis in auricular fibrillation is attributed to its power of decreasing the conductivity of the auriculo-ventricular bundle thereby blocking many of the contracting impulses starting in the fibrillating auricle. While the pulse does not usually regain complete regularity under digitalis, the reduction to nearly normal rate, or even below it, affords the patient marked relief of dyspnoea and other distressing symptoms. Cushny found that 90% of cases react to digitalis by slowing of the pulse rate. In auricular flutter the auricle will often be thrown into fibrillation by digitalis before the pulse rate is lowered.

Diminished Tonicity. In myocardial weakness, especially when healthy muscle fibres have become exhausted in the endeavor to overcome abnormal resistance (Mackenzie), digitalis has achieved its reputation as a superior cardiac remedy. Its use is, therefore, indicated more especially in valvular lesions with symptoms of decompensation, as dyspnoea, cyanosis, rapid pulse, dropsy, scant and high colored urine, etc.; in dilatation of the heart from muscular strain or pregnancy; in pericardial adhesions with failing compensation. It is less effective in those cardiac decompensations due to muscular degeneration, as cardio-sclerosis or fatty metamorphosis, and Mackenzie has pointed out that in cases of fever, as in pneumonia or rheumatic fever, it can be of but little value. When pulsus alternans occurs he regards digitalis as not only useless, but possibly injurious. This is contradicted by many other observers, who claim good results from digitalis. In cases under my personal observation nothing but satisfactory results have been obtained, both as to cardiac rhythm and general effect. Complete heart block, the danger of Stokes-Adams syncope being past, offers no contra-indication for the use of digitalis when dropsy sets in, for the sinus stimulus is already barred from reaching the ventricle and the direct tonic effect of the drug upon the muscle of the ventricle will occasionally help to restore compensation. General improvement very often takes place in cases of cardiac decompensation without any reduction of the pulse rate.

Digitalis is seldom of any value in paroxysmal tachycardia without auricular fibrillation or flutter, in sinus irregularity, or in the palliation of extra-systoles. A routine employment of digitalis for precordial pains, for palpitation or for a murmur constitutes a deplorable abuse. Let it be well understood

that without decompensation valvular lesions offer no indication for the use of digitalis, since over-stimulation of a myocardium that has already regained tone is apt to lead to a premature destruction of its integrity.

The continued administration of digitalis is very prone to lead to the development of toxic symptoms. In the wards of the Bellevue Hospital, Bailey² found evidences of toxic action of digitalis in 25 per cent. of all cases of heart disease. To discriminate between cardiac irregularity produced by disease, and that accruing from a continued use of digitalis, is not always easy. The possibility of toxic symptoms should always be borne in mind, for sometimes the digitalis action, which has been long delayed, develops with great rapidity into marked toxic activity. Any of the following symptoms, if arising during the administration of digitalis, denotes a toxic action:

Sinus Irregularity. This was frequently observed by Cushny after the pulse of auricular fibrillation was slowed with digitalis. The irregularity varies with the phase of respiration, retardation occurring during expiration and acceleration during inspiration.

Simple Slowing. The heart maintains a regular rhythm, but its action is very much retarded. A pulse of 60, or under, demands immediate withdrawal of the drug, inasmuch as the pulse may grow progressively slower for a few days after the administration is stopped.

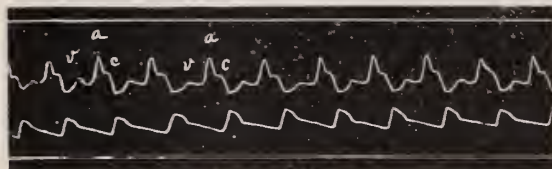


FIG. 1.

FIG. 1. Normal jugular and radial tracings. *a*—auricular wave in jugular vein, produced by accumulation of blood in the vein during contraction of the right auricle. *c*—carotid wave, produced by distension of the carotid artery during contraction of left ventricle. *r*—ventricular wave, due to obstruction of the flow in the jugular vein offered by the closed tricuspid valve during systole of right ventricle. Note the short distance between the auricular and carotid waves, the so-called *a-c* interval.

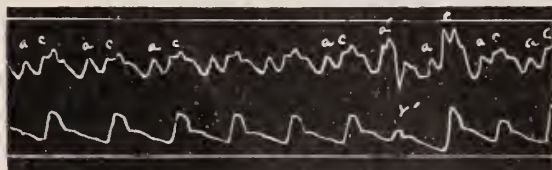


FIG. 2.

FIG. 2. Increased *a-c* interval (threatened heart block) interpolated extrasystole. (From a case of my carditis, with subsequent death due to Stokes-Adams syncope.) Note the relatively longer *a-c* interval, which lengthening is caused by obstruction to the impulse of contraction traveling from the auricle to the ventricles, and resulting in a delayed ventricular systole—the first step toward heart block. At *r'*, a premature contraction of the ventricles, from an abnormal impulse, is observed (ventricular extrasystole); and this coincides with the normal contraction of the auricles, so that regurgitation into the vein is shown at *a'*.



FIG. 3.

FIG. 3. Auricular extrasystole. In this tracing the premature *c* wave is preceded by an *a* wave, which is also premature. Evidently the impulse started prematurely in the auricle.



FIG. 4.

FIG. 4. Double extrasystoles. The first extrasystoles are evidently caused by a premature impulse starting in the auriculoventricular node, causing the auricles and ventricles to contract simultaneously, as recognized by the regurgitation into the jugular vein at the time of the normal auricular contraction.

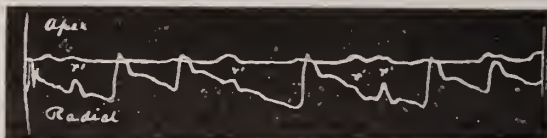


FIG. 5.

FIG. 5. Same showing apex beat above instead of the jugular tracing. The action of the apex is seen to correspond to both extrasystoles.

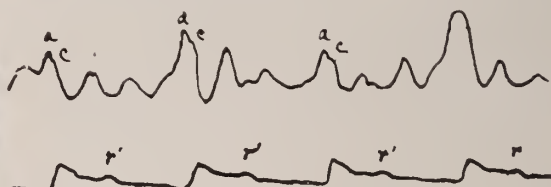


FIG. 6.

FIG. 6. Coupled beats. (Pulsus bigeminus.) These are small pulse beats occurring prematurely, being located in front of their normal position.

Coupled Beats: (Pulsus bigeminus). This consists of an extra-systole following each normal beat. In certain cases of auricular fibrillation of rheumatic origin Mackenzie advises the use of digitalis "until the characteristic coupled beats appear." A discontinuance of the drug at this point is always advisable. Less regularly occurring extra-systoles may also be produced by the toxic action of digitalis.

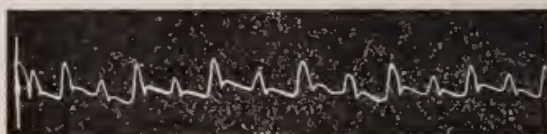


FIG. 7.

FIG. 7. Pulsus Alternans. The pulse beats (radial) are seen to alternate in size, but each begins in its normal location. Caused by myocardial exhaustion.

Pulsus Alternans. Here a large and a small pulse wave alternate as in coupled beats, but each wave is found in its normal position, instead of a premature beat as in extra-systoles. Pulsus alternans is, according to Mackenzie, evidence of loss of tonicity of the muscle fibres, and when caused by digitalis is a result of overstimulation.

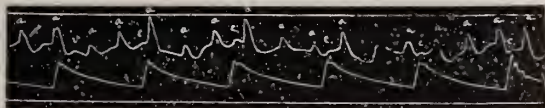


FIG. 8.

FIG. 8. Complete heart block. Pulse 34. Rhythm 8 to 5, as indicated by the relative frequency of the auricular and carotid waves.

Partial and Complete Heart Block. Stimulation of the vagi is attended by a lowered conductivity of the auriculo-ventricular bundle, and may occasionally become so pronounced as to completely bar the passage of the contractive impulse. This explains the power of the drugs belonging to the digitalis series to produce partial or complete heart block. The effect is not uniformly produced under heavy doses of digitalis, but, on the other hand, may be caused by even small doses of the drug. It should be expected when a rapid ventricular action suddenly becomes intermittent or much slower.



FIG. 9.

FIG. 9. Auricular Fibrillation. Note the absence of the auricular wave in the jugular (upper) tracing; also the very irregular and rapid radial pulse (lower tracing). Four hours later the heart action became perfectly normal.

Auricular Fibrillation. While proving the most valuable remedy in auricular fibrillation pathologically induced, digitalis, in toxic doses, may also produce a typical fibrillation of the auricle. The pulse is very frequent and irregular, the output of the ventricles is diminished, and ultimately the ventricular action may also pass into fibrillation.

Other symptoms of digitalis intoxication are nausea, vomiting, diarrhoea, and headache. Delirium has also been noted.³

The question of cumulative effects of digitalis has been under considerable discussion, pro and con. This must be dependent upon the relation of absorption and elimination. A number of observers have noted a progressive action of digitalis several days after the use of the drug has been discontinued. Moreover, it has been physiologically demonstrated by Issekutz⁴, of the Pharmacological In-

stitute of Heidelberg, that the affinity of digitalis for the myocardial fibres is more durable—that is, its union with the fibers firmer—than that of most other drugs. When the administration of the remedy occurs with greater frequency than proportionate to its elimination, it seems evident that an accumulation will occur in the tissues until pronounced intoxication is produced.

The contra-indications for the use of digitalis are cerebral hemorrhage or embolism, aortic aneurysm, aortic insufficiency with an irregular pulse (Abrahams), and prolonged a-c interval or partial heart-block. The action of the digitalis allies of reducing the conductivity of the auriculo-ventricular bundle, especially when already impaired by disease, tends to arrest, more or less completely the contractive impulse before the ventricles are reached, and thus produce an often fatal syncope, the Stokes-Adams seizure. This affords the most plausible explanation of those otherwise unaccountable cardiac cases referred to by Huchard, Mackenzie and many others, where death suddenly followed the administration of small doses of digitalis. When simultaneous jugular and radial or apex tracings cannot be obtained, an intermittent pulse, if present, will prove a most valuable indication, since an extra-systole so feeble as not to be palpable at the wrist, will be audible, with the stethoscope over the heart, while an intermission due to heart-block will be attended by a complete ventricular pause.

STROPHANTHUS

This drug is closely similar to digitalis in physiological and toxic actions. Cushny states that it has less tendency to produce nausea, vomiting and headache than digitalis, but this difference is not very marked. On the other hand, it is more prone to produce diarrhoea. Mackenzie asserts that he got the same reaction from strophanthus as from digitalis, but only after a much longer time. Experimentally it produces dilatation of the blood vessels of the skeletal muscles, and shows a lesser tendency to increase blood pressure. For this reason it has been preferred therapeutically to digitalis when the blood pressure was high.

The greatest value of strophanthus lies in the fact that as an alkaloid, strophanthin, it may be used intravenously. This, however, should never be attempted without the realization that one is using a powerful drug. It must never be used after digitalis medication unless three or four days have elapsed to avoid the cumulative effect. Truclson⁵ recommends 0.5 mg. as the usual initial dose. If pulse, respiration and diuresis or subjective symptoms are favorably influenced, the dose

may be increased to 1 mg. and given three or four times a week. A safer rule is never to make a second injection until the benefits of the previous dose begin to wane. Where prompt results are desired, as in sudden inception of auricular fibrillation, an intravenous dose of strophanthin is of greatest service.

ATROPINE

The action of atropine upon the heart is due mainly to its power of paralyzing the terminal nerve fibres of the vagus ganglia. Its effect depends upon the role that the vagus plays in the control of heart action—in the child and the aged its action is slight, because the inhibitory nerve, which it paralyzes, is functionally less active than in patients at the age of 25 to 35. As the result of suspending vagus action, atropine produces a proportionate acceleration of the pulse, increase in the extent of the systole, decrease in the diastole, and augmentation of the output of the heart per minute. The auriculo-ventricular bundle becomes more or less freed from the control of the vagus, so that its conductivity is increased and the time required for the contractile impulse to reach the ventricle is shortened (shortening of the a-e interval).

There is often an increase in blood pressure, partly due to the augmented output of the accelerated heart action, and partly to excitation of the vaso-motor center in the medulla, which contracts the sphlanchnic vessels. A simultaneous stimulation of the vaso-motor center diverts the blood from the abdominal cavity to the more superficial parts.

Therapeutically atropine, as a heart stimulant, is best indicated in those circulatory disturbances produced by excitation of the vagi. Thus in the large class of cases of vagotomy, in irritation of the vagus from enlarged glands, in digitalis intoxication with bradycardia, to stimulate a slow pulse in the crisis of pneumonia, etc., it may render valuable service. Auriculo-ventricular dissociation when due to reflex action is restored by therapeutic doses of atropine as long as its physiological effect is maintained.

It has been extensively used as a stimulant in threatened heart failure due to chloroform anesthesia, but since Goodman Levy⁶, of the Research Department of the London University, has demonstrated that dilatation of the ventricles is a condition which is protective against ventricular fibrillation, such drugs as atropine and adrenalin can only add to the dangers already incurred by the anesthesia.

As has already been intimated, childhood and advanced age are least responsive to atropine stimulation.

That the cardio-vascular response to atropine is clinically uncertain and of brief dur-

ation may be inferred from the following cases that have come under my personal observation⁷:

A woman 49 years of age, suffering from arthritis deformans, with normal pulse and moderately high blood pressure, was given 1-100 gr. hypodermatically. Result: No increased cardiac action, moderate reduction of blood pressure. A repetition of the experiment two days later had exactly the same result.

A man, aged 78 years, affected with cardio-sclerosis, was given two hypodermatic doses of 1-100 gr. atropine, 7 minutes apart, and developed a chill, red face and other symptoms of atropine intoxication. There was a very slight increase in pulse rate (3 to 9 beats) of about one-half hour's duration, and marked rise in blood pressure (10 to 35 m.m. Hg.) lasting about one and a half hours.

An epileptic boy of 8 years, presenting a cervical rib, responded to 1-50 gr. atropine, given hypodermatically, by an increase of pulse rate, which rose from 89 to 120, and a rise in blood pressure from 85 to 91. The effect on blood-pressure was transient, but rise of pulse rate lasted more than an hour.

STRYCHNINE.

This remedy rivals digitalis in its popularity as a heart stimulant. The reason, aside from tradition, for such a popular favor is not readily found, for exact evidence, experimental or clinical, of an elective action of strychnine upon the heart is wholly wanting. It is true that being a stimulant to the cerebro-spinal system it may be inferred that through the vagus center or the accelerator fibres of the spinal cord it may influence cardiac function, but such a power is not well demonstrated, even with the toxic doses used in the experimental laboratory, and an increased output of the heart beyond that produced by a definite dilution of any poison has never been shown. Acceleration of the heart action and increase of blood pressure attendant upon strychnine convulsions is a direct result of the muscular movements and, therefore, therapeutically not to be considered. Cushing⁸ states that the heart is not directly affected in mammals, though it is slightly slowed by stimulation of the inhibitory center. With reference to strychnine as a heart tonic Mackenzie⁹ expresses the following opinion:

"I have carefully sought for its special effect on the heart and found none. When I inquired into the evidence for its supposed good effect, I found that it was practically all clinical, and clinical evidence endows the drug with the most diverse properties. It is

recommended as cardiac stimulant in slow-acting hearts, and even in heart-block it is said to quicken the beat. It is also recommended in the too excitable heart, as when there are extra-systoles, and in the rapid heart of acute myocardial affections. It is said to be beneficial in cases of low blood pressure, and equally beneficial in cases of high tension, and even in angina pectoris. The evidence that can show a drug to possess the property of exciting the sluggish and of soothing the excited, of raising the low pressure and relieving the high, speaks more for unreasoning faith in the drug than for the beneficial properties of the drug itself."

To put the therapeutic value of strychnine to a clinical test, Newburg¹⁰, under the auspices of the Council of Pharmacy and Chemistry of the American Medical Association, undertook a series of clinical experiments on 25 cases in the Massachusetts General Hospital. Eight cases presenting broken cardiac compensation were observed in three stages: (1) under rest and diet, (2) under strychnine medication, in 1-30 to 1-10 gr. doses, (3) under digitalis and diuretics to prove whether the cases were amenable to medicinal treatment. No case showed any beneficial effect on the broken compensation while under strychnine treatment, whereas four cases subsequently recovered their compensation under digitalis and diuretics. Seventeen cases belonged to a group of infectious cases and hypotensive cases studied to ascertain the effect of single doses of varying size or of a number of doses given within a short period of time on the systolic and diastolic blood pressures, on the rate and character of the pulse, on the respiratory rate, and on the general condition. This group proved as barren of results from strychnine medication as did the first, no evidence presenting either of quickened heart action or of increased blood pressure.

Parkinson and Rowlands¹¹ also carried out a series of clinical experiments with strychnine, and reached the conclusion that on no occasion was there produced any increase in blood pressure; that the slowing of the pulse rate (averaging 3.2) following the hypodermatic injection of strychnine was also observed following the injection of water; that there was no effect on the irregularity of the pulse; and that there was no objective improvement in any case.

Under my own observation have been nine cases, previously reported, most of which presented low blood pressure. One showed ventricular extrasystoles. One case with normal blood pressure and rapid pulse, showed a slight reduction of each under strychnine; and another with low blood pressure and

rapid pulse reacted by a further reduction of the pressure. So far as any cardio-vascular stimulation is concerned my investigation was entirely void of result.

It is my conviction, therefore, that strychnine at no time can be depended upon in those critical moments when a prompt stimulation of the cardiac function is desired, and that the drug should summarily be stricken from the list of cardio-vascular stimulants.

CAFFEINE.

Physiologically caffeine acts on man as a stimulant to the vagus and vaso-motor centers, and also directly on the heart muscle. The antagonistic action of the vagus center and of the myocardium is so nearly balanced in man under moderate doses of caffeine that the resultant effect does not deviate markedly from the normal, either in rate of cardiac contractions or in the total output per minute. The tendency is toward a slower rhythm, a more vigorous contraction, and a slightly greater output per minute, which when taken in connection with a slight stimulation of the vaso-motor center characterize caffeine as a mild cardio-vascular stimulant. An increased flow through the coronary arteries has also been observed; the pulmonary vessels it first contracts, then dilates.

Its tendency to produce distressing nervous and gastric symptoms, its bitter taste, and the objectionable feature to its hypodermatic and intravenous use are serious drawbacks to its general employment.

Careful observations of the clinical use of caffeine have proven that any beneficial effect from caffeine in cardiac cases is obtained only in maximum doses.

Newburgh¹² adopted the same method of testing the clinical value of caffeine as has already been mentioned regarding strychnine. Caffeine sodium-salicylate was employed. The cases observed were three of severe pneumonia, one of general peritonitis, one of fatal tuberculous enteritis, two of traumatic shock, and one fatal septicopyemia. He concludes that if any beneficial effect was obtained by the drug, it could not be demonstrated by his method of observing pulse rate and blood pressure.

In four cases in children the action of caffeine sodium benzoate, in 1-4 to 1-2 gr. doses, given hypodermatically or by mouth, was studied by Lucas¹³. Only in doses of two or more grains hypodermatically administered was there any appreciable effect, and then it was but slight and of short duration.

Taylor¹⁴, of Cleveland, selected 15 cases of advanced myocardial disease with broken compensation, for treatment with caffeine.

In 3 cases the result was excellent, in 4 moderate, in 3 there was no perceptible result. He concludes that in myocardial insufficiency with retained body fluid, caffeine causes: "a moderate increase in the urine output, with a proportionate loss of body weight. This increase reaches its maximum on the fourth day; a drop in both the systolic and diastolic blood-pressures, which may stand in casual relation to the diuretic coefficient, contrary to the usual teaching; a slight (3.6 per cent) temporary rise in the pulse rate, but no permanent change in either the pulse or the respiratory rate; a moderate relief of the cardiac symptoms; the constant appearance of distressing nervous and gastric symptoms."

It seems as though caffeine does possess some value as a cardiac stimulant, but owing to its disagreeable by-effects when administered for protracted periods, and its prompter action than digitalis, it is better suited to acute than to chronic cases. In auricular fibrillation it is, however, less useful than digitalis or strophanthus.

CAMPHOR.

As a temporary heart stimulant this drug, more than any other, is employed by clinicians in continental Europe. It appears, however, to be used somewhat empirically, for the effects observed upon animals have been too slight and too inconstant to afford indubitable evidence of cardiac stimulation. Cushny⁸ states that the heart is sometimes slowed by camphor in man and animals, but is generally little affected in either strength or rate. Plant¹⁵ remarks that, taken as a whole, the results of different series of experiments instituted by him lead to the conclusion that camphor does not produce effects which entitle it to be regarded as a direct heart stimulant. On one point there is almost unanimous agreement: that the irritability of the cardiac muscle fibres is increased by camphor. The capillaries have been found to dilate, and the blood-pressure to fall slightly when not otherwise influenced by convulsions. Sasson claims that in man after small doses (0.1 to 0.5 gm.) the pulse becomes fuller and stronger, while after large doses (0.8 to 2 gm.) its frequency and fullness diminish.

Heard and Brooks¹⁶ studied the effect of camphor in a variety of clinical cases, classifying them into the following groups:

Five normal persons. Result: In one case fall of 17 mm. in systolic blood-pressure and 25 mm. in diastolic.

Auricular fibrillation and cardio-vascular lesion. Nine observations made. Result: Increase in systolic tension in one case; increase in diastolic in two.

Valvular lesion with normal rhythm. Two

acceleration in pulse rate, with quick return acceleration in pulse-rate, with quick return to normal; and a brief rise in diastolic pressure. The second test was negative.

Myocardial affections. Four patients. Results were practically negative.

They summarize that in these experiments camphor, in doses sometimes as large as 50 grs., failed to produce any definite effects. The variations in pulse and in blood-pressure occasionally attending the use of the drug were so inconstant as to make it probable that they had no relation to the medication employed.

My own cases consisted of three patients:

An advanced case of fibroid tuberculosis with low blood pressure, was given 6 grains camphor in oil, hypodermatically. Result: doubtful.

A case of cardio-sclerosis with high blood-pressure, was given 6 grains camphor in oil, hypodermatically. No result observed.

A man suffering from cerebellar disease and chronic nephritis, with rapid pulse, ventricular extrasystoles, and high blood pressure, received 6 grains camphor in oil, hypodermatically, and the following developments were observed: A slight rise in pulse-rate, with a reduction in the number of extrasystoles. There was also a slight rise in the systolic and diastolic tensions, attended by an increase in pulse pressure, thus affording an increased amplification-frequency coefficient indicating a small increase in the cardiac output per minute.

Recent clinical research, with its more accurate means for observation, leads us to the inevitable conclusion that among the digitalis allies are to be found the most effective cardiac remedies. Among these, digitalis stands out as a therapeutic giant—a powerful friend when rightly used, and a most dangerous enemy when its powers are misused. Its virtue does not seem to lie alone in vagus stimulation, for here aconite excels it; nor in myocardial excitation, in which the action of helleborein is almost wholly spent; but probably in a peculiar dynamic effect exerted directly upon the muscle fibres of the heart.

Of the heterogeneous group not belonging to the digitalis series few drugs have proven themselves actually worthy of the designation cardio-vascular stimulants. The stimulating effect of atropine is transient and uncertain, and as for the rest, the nitrites excepted, positive results are proving the exception rather than the rule. It must be admitted, however, that many beneficial results may escape the physical tests employed, and that the occasional effects observed should teach us a more careful individualization of cases before treat-

ment is begun, and a closer scrutiny of results thereafter.

Undue confidence in drugs begets a neglect of other means often much more efficient. Regulation of rest and diet, increasing the blood-pressure by an irritant upon the skin or lowering it by spinal concussion, flushing of the capillaries by dilatation of the rectal sphincters, resuscitation by stimulation of the olfactories, intelligent use of heat and cold, these are some of the measures in many cases more prompt and effective in cardiac emergency than the "will-o'-the-wisp" action of some of the reputed heart stimulants.

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Health First.—A recent editorial in the New York Tribune emphasizes the economic advantages which are likely to result from the new movement for compulsory health insurance. The Tribune suggests that, just as compensation for industrial accidents gave rise to a campaign for "Safety First," so the establishment of health insurance will create a movement for "Health First." "Employers will learn that their business methods are susceptible of improvement to lessen sickness and disease among workers." From Colorado Medicine, May 1916.

ANURIA.*

By J. M. MORRIS, Louisville.

In looking up this subject I find very little is said about it in medical literature. Especially is this true with reference to anuria in scarlet fever. I shall not try, therefore, to present you with a paper of any great length, but will confine myself largely to the report of two fatal cases following scarlet fever. Albuminuria accompanies nearly all severe cases of scarlet fever. In many cases this is simply the ordinary febrile albuminuria due to acute degeneration of the kidney. In those with severe throat complications, and in nearly all septic cases, there is an acute diffuse nephritis, with interstitial nephritis especially marked. This occurs at the height of the febrile process, and is rarely accompanied by dropsy. But the most severe and most characteristic renal complication, that is usually designated as post-scarlatinal nephritis is a diffuse nephritis with changes in the glomeruli as the most prominent feature. It usually develops during the third or fourth week of the disease (as did one of the cases to be reported) and may follow mild as well as severe cases. The urine is always scanty and frequently entirely suppressed (anuria). Death is usually caused by acute uremia. But before reciting the cases I have in mind it would be well for us to remember just what anuria means. By this term is meant a complete arrest of urinary secretion.

To that form which occurs in renal disease the term suppression is usually applied. Anuria is to be carefully distinguished from retention, from the scanty secretion when food is refused or withheld on account of illness or other causes, and also from that form which accompanies diarrhoea with large watery stools. The two cases to which I desire to call your attention, were brother and sister; the only children of the family. The mother died of pulmonary tuberculosis about two years before the death of these children, the father is in good health so far as I know. The first case, Maggie, 4 years old, was taken to a local infirmary and operated on, having tonsils and adenoids removed. At the end of three days she was removed to her home and on the fourth day was found to be suffering with scarlet fever. During the course of the disease, which was not more severe than the average, she developed a mastoid abscess for which she was operated about fourteen days from the beginning of the fever. Her progress after operation was satisfactory, and she seemed to be well on the way to recovery,

*Read before the Jefferson County Medical Society.

when the kidneys, rather suddenly, ceased to perform their functions. Complete arrest of secretion coming on during the next two or three days lasting for a period of twenty-four days, during which time no urine was voided and none being found in the bladder. The child died at the end of twenty-four days, after complete suppression lasting this period of time, with acute uremia. No convulsions occurred during her illness.

The other case I desire to mention was that of little Dudley, age 7, brother of the case above mentioned. He took sick about three weeks after exposure to sister and had apparently a mild attack of the disease, was treated as ordinary cases of scarlet fever are treated. At about the end of the two weeks the little one showed signs of diminished urinary secretions and in a few days complete suppression had occurred. Patient lived about twelve days after kidney ceased to functionate, dying of acute uremia exactly as his sister had done.

I would like to say in connection that Drs. Barbour and Dabney were in attendance with me in these cases. I would like to mention also in connection with this report that an aunt who was assisting in nursing these children contracted scarlet fever and after several weeks, developed mastoiditis requiring an operation. But after a long and tedious convalescence, made complete recovery. I would also say another aunt who was assisting in the nursing of these children contracted pneumonia and died about the time of the death of these children, making on the whole rather an unenviable record for myself and associates.

Our Friend, The Doctor.—A doctor is a member of the greatest and most beneficent and unselfish of all the learned professions. We jest at the doctors in our hours of health, but when disease seizes upon the strength of manhood, when even the mighty Caesar cries, like a sick child, when the hour of pain is upon us, then in the hushed chamber and by the lonely lamp of the watcher, we invoke the merciful ministrations of the doctor, and with willing feet he comes through the storm and darkness, and with skill and patience and courage he battles with disease and beats back death from the House of Life.—Los Angeles Times.

Tuberculosis presents, on the whole, the most important example of social evil. No other disease has the economic importance; no other disease is so interwoven with industrial conditions; none has such relation to habitation.—H. B. Favill.

THE MANAGEMENT OF NORMAL LABOR.*

By NEVIL M. GARRETT, Frankfort.

A normal labor is one in which the vertex presents, and which is terminated within twenty-four hours by the forces of nature without complication in any of the three stages, and without injury to the mother or child. Should the fetus be still born; its death having occurred just previous to or during labor, but not being directly due to the labor; the labor would still be within the limits of normal.

When we are engaged in advance to accouch a woman, we should advise her as to her conduct during the period of gestation and as to the preparations for her confinement. Tell her to avoid long or rough automobile rides, heavy lifting, coitus, at the time which would correspond to her menstrual periods, and to cease indulgence altogether at least two weeks before her expected confinement. Tell her to take exercise daily, and that as the time for delivery approaches to keep her bowels gently open, to drink larger quantities of water than usual in order to keep the kidneys flushed and to report to us at once upon the appearance of any abnormal sign, such as suppression of the urine, severe headaches, swelling of the hands or feet or excessive nervousness.

Have her to send us a twenty-four hour specimen of urine once a month beginning with the fifth month, and during the last six weeks to send it every two weeks.

If the patient is a multipara we should inquire into her previous pregnancies. I believe it to be good practice to make a digital examination of all obstetrical patients six weeks, or a month before the expected confinement, even though the patient be a multipara who has borne several children, without particular trouble. Such a patient may now have an abnormal growth in her pelvis, which will render delivery at term, by the normal route, difficult or impossible. Such a growth may have been present at the last delivery and have been of such small size as to have caused no particular trouble, but since that time may have attained such proportions that we will be compelled to reckon with it.

In all primipara, and those multipara, whose last labors have been particularly difficult, we should form an idea as to the size of the pelvis by the use of the pelvimeter.

The key note of this subject is aseptis.

As far as we know interference from without is not contemplated in the natural plan of

*Read before the Kentucky Midland Society at Lawrenceburg.

parturition and probably many women who die of puerperal sepsis would have lived had not infection been introduced on the examining fingers of the obstetrician, or with some unsterilized instrument or solution used during labor or the puerperium. I do not mean to say that all cases of infection are of extraneous origin. Neither do I mean to convey the idea that the woman should not be attended by an obstetrician, for I believe that much may be done, in many cases toward saving the life of the child and alleviating the sufferings of the mother, by intelligent interference under proper aseptic precautions. In order that we may do aseptic work we should make preparations in advance. In most cases where people lay enough stress on confinement to engage the services of a physician before the onset of labor it is a comparatively easy matter to have a supply of sterilized sheets, towels, gowns, vulvar pads and large pads for absorbing the discharge, on hand at the time of delivery. In order to do this it is not necessary to buy an expensive and impractical outfit from a surgical supply house.

The pads may be made from absorbent cotton, and cheese cloth by the patient or her friends, and then sent to the doctor for sterilization, or if the doctor has no sterilizer, an ordinary wash boiler or big lard can, with a well-fitting top makes a good sterilizer for home use. The articles to be sterilized should be put up in neat packages of convenient size, wrapped in towels so that no part of any article to be sterilized is exposed to view. Sheets, gowns, and towels should not be wrapped tightly as the steam will more readily penetrate them if loosely wrapped. Put about three inches of water in the boiler, then place an empty tin can on its side, in each end of the boiler. On the tin can lay a small clean board, on which the packages to be sterilized are to be laid, so that they will not touch the water, but will be exposed to the steam. Put the cover on tight and set the boiler on the stove, where it is to be left for an hour after the water begins to boil well. This will leave the articles damp but they may be dried on a radiator or in the oven of the stove, care being taken not to scorch them. After drying they should be placed in a clean drawer or closet, where they will be out of the dust, and should not be opened until labor begins, and then with clean hands only. They should be prepared about two and a half weeks before the expected confinement.

The following is a good list of articles to prepare: 2 gowns, 3 sheets, 3 pads, two and a half or three feet square; 6 dozen vulvar pads and one dozen towels. New, unused, diapers may be used instead of towels.

In addition to the above, preparation

should also be made for dressing the stump of the umbilical cord. The physician may carry supplies for the cord in his own outfit, or they may be prepared separately for each case. Personally, I carry a package containing material for ligating the cord, a piece of gauze with which to cover the cord as soon as it is cut and a rubber band to hold this gauze in place. This package also contains a medicine dropper, gauze for the permanent dressing of the cord, and a supply of cotton, which is useful for cleansing the mother when ready to examine for perineal lacerations.

When labor begins the bed should be prepared by placing a rubber sheet, covered by a cotton sheet over the mattress. On the cotton sheet should be placed one of the large sterile pads. Over all this should be placed another sheet with which to cover the patient and over the top sheet such other coverings as may be necessary.

I believe that the cleanliness of the patient is one point which is not sufficiently insisted on by many of us. It matters not how clean the examining hand of the obstetrician may be, if the external genitals, anus, thighs, etc., of the patient are not clean, he may carry infection into the genital canal in making his examination.

In the beginning of labor the pudendal hair should be either shaved off or trimmed as closely as possible with blunt pointed scissors. After this she should have an enema, unless her bowels have moved well within the last two or three hours. After the enema has been expelled the patient should have a sponge bath all over with soap and warm water, paying especial attention to the vulvar region. The sponge bath is preferable to the tub bath on account of the liability of dirty water entering the vagina if the tub bath be taken. On account of the danger of infection, the tub bath and sexual intercourse should both be prohibited for at least two weeks before the expected confinement. The sponge bath is to be followed by sponging, from the breasts to the knees, with a 1 to 1000 bichloride solution, after which the patient puts on a sterile gown.

The physician should respond to his obstetric calls as soon as possible, for by so doing he may be able to correct faulty presentations, replace small parts, prevent perineal lacerations, etc.

Upon entering the lying in room the doctor should note the general condition of the patient, inquire as to the condition of the kidneys and bowels, and as to whether the enema and bath have been taken. If they have not he should see that they are attended to. Under some circumstances the enema may be omitted but unless the time of delivery is supposed to be very near at hand the patient

should, at least, have a bath about the abdomen, thighs, genitals and anus. Unless there is time for this, internal examinations must not be made. While in some cases valuable information may be obtained by abdominal palpation of the foetus, the majority of us still have to depend on vaginal examination to diagnose the position of the child. However, vaginal examinations should be reduced to the minimum number, and must be made under strict aseptic precautions.

In preparing his hands the physician should first wash off the superficial dirt from his hands and arms up to his elbows with soap and warm water, after which he should remove the dirt from under and around his nails with a knife or other instrument. After this the hands and arms are to be well scrubbed with a clean nail brush, using soap and warm water, and paying especial attention to the nails. He then rinses his hands in sterile water and puts on rubber gloves which have been boiled for ten minutes.

The physician should see that his gloves are cleaned and boiled after the case is over, as it sometimes happens that for lack of time, or heat, it is impossible to boil them just before using. In this event they may be washed with soap and water and immersed in a 1 to 2000 bichloride solution.

For a lubricant for the examining fingers I prefer sterile liquid soap, preferably one containing a mild antiseptic. The hands are to be reprepared for each subsequent examination. If examinations are made so close together that the gloves are not removed from the hands, then they should be washed with soap and water and rinsed in an antiseptic solution before the next examination. Prominent authorities have been on both sides of the question as to whether the vaginas of healthy women contain pyogenic bacteria. In the absence of a suspicious discharge the vagina, for practical purposes, may be considered sterile; but not so with the vulva and introitus vagina, as pyogenic cocci do exist there in a state of activity, and for this reason great care should be exercised to cleanse this region before making an internal examination. The external genitalia having been cleansed in the primary preparation of the patient the physician should, before the first examination, cleanse the introitus vagina with sterile soap and water and then wipe the introitus and vulva with a bichloride or other antiseptic solution. In ordinary practice it is difficult, if not impossible to render the external genitalia sterile, therefore we should as far as possible, avoid contact with them in introducing the examining fingers. This is best accomplished by having the external genitals exposed and separating the labia

widely, with the thumb and fingers of one hand, while introducing the examining fingers of the other. During this time the limbs may be covered with a sterile sheet, thereby reducing the exposure of the patient to a minimum.

The old practice of examining the patient by touch rather than by sight cannot be too strongly condemned, as the danger of infection is greatly increased thereby.

At the first examination we should, if we have not previously done so, examine for obstructions to delivery, note the force of uterine contractions, the condition of the os, and if this is sufficiently dilated the presenting part of the foetus, and if possible the position of the foetus, and whether or not the membranes have ruptured. An exact rule as to the frequency of subsequent examinations cannot be given, the matter depending largely on the stage of labor and the force and frequency of uterine contractions.

"Examination after rupture of the membranes may guard against the neglect of face presentation, which sometimes occurs at this time, and of prolapse of the small parts of the foetus or of the cord."

If we make a vaginal examination soon after rupture of the membranes and every thing is found to be satisfactory with an anterior occipital presentation, and good pains we may be able to complete the case without further internal examinations. However, should the pains be ineffective, or for other cause the case is prolonged, it will be advisable to examine again to see what progress has been made or what is causing the delay.

When internal examinations are not made it will be necessary, toward the termination of the second stage, to make frequent ocular examinations so that we may be ready to protect the perineum when it becomes necessary. If the first stage of labor be prolonged the patient should be encouraged to take small quantities of liquid nourishment, and be induced and aided to sleep, if possible, between the pains, especially if labor commences early in the night. For this purpose one-sixth grain of morphine with 10 or 15 grains of calomel may be used.

Unless labor seems to be unduly prolonged, or there is some special indication for hastening delivery, it is probably better to let nature take its course. If the delay appears to be due only to weak, ineffective pains, one-half to one cubic centimeter of pituitrin may be given, provided the cervix is fully dilated, the presentation normal and the pelvic diameters of average length. When we use pituitrin we should make immediate preparation to complete the delivery and have an

anaesthetic ready to check the contractions should they become too violent.

If delay is due to tough, unruptured membranes, despite a fully dilated os and normal soft parts, the membranes should be ruptured with a sterile instrument during a pain. The same procedure is indicated if there is uterine inertia, due to overdistention. In the absence of any indication for rupturing them the membranes may be allowed to remain intact until they reach the vulva.

As a rule, and especially in multipara, the patient should not be allowed to get up and walk around after the completion of the first stage, on account of the danger of the child being born while the mother is in the erect posture.

The patient need not waste her strength at bearing down efforts in the first stage, but during the second stage, and especially if the contractions are inefficient, she should be instructed to hold her breath and bear down. At this time she should be provided with some mechanical device, upon which she can pull, and a stout individual should push against her knees during strong pains.

An important part in the management of the second stage is the prevention of perineal tears. Unless there is some indication to the contrary we should give ample time for the stretching of the soft parts. If the pains are strong we should, during the pains, press the head backwards, and upward against the symphysis to promote flexion of the head. If possible to prevent it, we should not allow the head to be born until the occiput has pretty well emerged from under the symphysis. In applying this pressure we should use a sterile towel and be very careful that the fecal matter, so frequently expressed at this time, does not come in contact with the birth canal. Episiotomy has been advised where laceration is threatened, but is not generally practiced. The only case in which the writer has been strongly tempted to try it got through with a slight tear, requiring only two stitches.

When the pains are strong chloroform is very valuable at this time, both to alleviate the suffering of the mother and to help us control the progress of the head.

Immediately after the delivery of the head the attendant should examine to see if the cord encircles the neck of the child and if it does a loop should be enlarged and drawn over the head but if this cannot be done the cord should be cut between haemostatic forceps.

Immediately after the birth of the child attention should be given to the establishment of the respiratory function unless it be already established, as evidence by crying. After respiration is established, the child should

be placed on its right side, to aid in the closing of the foramen ovale, and its head should be low to prevent cerebral anemia.

After the pulsation in the cord has ceased, or perceptibly weakened, it should be tied about an inch from the abdomen, with a sterile cord or string, first being sure that there is no umbilical hernia, which might allow a loop of bowel to be caught by the string.

A second ligature should be applied about two inches from the first and the cord cut with sterile scissors close to the first ligature. As soon as the cord is cut a piece of sterile gauze is placed over the stump and held on with a rubber band.

The scissors with which the cord is cut and two pairs of hemostatic forceps, which may be needed if there is occasion for great haste, should have been sterilized by boiling and kept in readiness.

After the vernix caseosa has been removed with olive oil or vaseline, and the baby gently bathed with warm water, the temporary dressing is removed from the cord and a permanent dressing of sterile gauze, with powdered boracic acid is applied.

A few drops of twenty-five per cent. solution of argyrol are instilled into the eyes of the infant.

As soon as the child is born the obstetrician examines the fundus of the uterus to see if it is well contracted and to detect the presence of another child if present. The examinations for determining the condition of the uterus should be frequently made during the first hour or hour and a half following the birth of the child.

An attempt may be made to deliver the placenta within from fifteen to thirty minutes after the birth of the child. It is usually separated from its attachments and deposited in the dilated lower uterine segment and upper vagina within thirty or forty minutes after the birth of the child. When this separation has taken place if it is not delivered by the contraction of the uterus and the bearing down efforts of the woman the accoucheur should deliver it by grasping the uterus and gently pushing it down onto the placenta, using the uterus as a body through which to exert pressure on the placenta, and at the same time making gentle traction on the cord.

If the placenta does not separate from its uterine attachments within forty-five minutes we may then try the Crede method of delivering it and if not successful in that, she should in the absence of hemorrhage or other indications for delivery, be given more time for its natural separation. The placenta may be allowed to remain in the uterus eight or ten hours without doing harm. The delivery of adherent placenta is not within the scope of

this paper. After delivery of the placenta and membranes the patient should have from a half to a dram of fluid extract of ergot to prevent post-partum hemorrhage and sepsis, and to aid in involution. The contraction of the uterine muscle keeps the sinuses closed, thus preventing the entrance of septic material into them and it aids involution by lessening the blood supply to the uterine muscular tissue.

At the completion of the third stage the external genitals, buttocks, lower abdomen and inner, upper aspect of the thighs should be cleansed with sterile water or an antiseptic solution and a careful ocular examination made for perineal and vaginal lacerations. It should be remembered that there may be severe lacerations of the vagina which are not visible externally. The labia are to be separated, both hands being used, and the parts thoroughly inspected. Following this examination if no surgery is required, the patient is to be cleaned up, a sterile pad applied to the vulva, and if necessary, a clean gown put on the patient and clean sheets on the bed.

The pad is to be changed whenever it becomes well saturated, and only sterilized pads are to be used during the first week. The vulva is to be cleaned with sterile soap and water.

The physician should be within call for at least an hour after the birth of the child and should not leave the patient until good uterine contraction has been secured.

If it is not convenient for the physician to see the patient daily, for the first three or four days, the nurse should be instructed to see that her bowels act within the first forty-eight hours, and to notify the doctor of any abnormal condition, such as retention of urine, chill, or fever.

If the labor has been perfectly normal, and the patient is not unduly exhausted, she may be allowed to use the commode from the first; in fact we should insist that she do so after the first two or three days, as it facilitates the passage of blood clots from the vagina.

She should be instructed to lie on the sides rather than on her back, after the first twenty-four hours, as the dorsal position during the puerperium predisposes to posterior displacement of the uterus. She may be allowed to sit up in from one to two weeks, but should not be expected to perform much work, which requires much standing or walking, for four or five weeks after the birth of the child.

The ninth revision of the United States Pharmacopoeia and the revised edition of the National Formulary are now in press and will probably be ready for distribution by July 15, 1916.

PYORRHOEA AND ITS RELATION TO SYSTEMIC DISTURBANCES.*

By B. P. RIVERS, JR., Louisville.

We are told by those who are in a position to know that between 90 per cent and 95 per cent of all adults are suffering from pyorrhoea alveolaris in some of its stages. More teeth are lost through its effects than from all other sources put together, thus impairing mastication, digestion, assimilation and life. It is the most persistent form of oral sepsis with which we have to deal, all of which facts convince us that it is one of the great problems of our day and age.

As to the etiology of this disease there has been a diversity of opinions, but the prevailing opinion of those most successful in its treatment at the present time is that it is of local origin, merely favored and modified in its existence by systemic debilitation. The predisposing causes are any irritants or injury of whatever nature which impairs the integrity of the gum margin such as lack of cleanliness, accumulation of tartar, imperfectly constructed crowns or bridges, improperly finished fillings, impaction of food or tobacco between the teeth, wooden tooth picks, irregular teeth, etc.

The special microorganism that may be held responsible for this disease has not been identified. In spite of the fact that much has been said and written in recent months concerning the ameba buccalis as the specific cause of pyorrhoea, I think we can safely assert that the case has not been conclusively proven, while on the other hand from the research work of Hartzel and Price, we have good reason to believe to the contrary. Hartzel, one of the leading and most successful pyorrhoea specialists of our country, and a research worker, who is earnest, energetic and scientific, tells us that the streptococcus in some of its forms is universally present in pyorrhoea pockets and surrounding tissue, and comes nearer being the specific organism responsible than any other.

I shall not stop here to consider treatment further than to say their name is legion, most of which have been weighed in the balance and found wanting. Autogenous vaccines have been tried and in the main have been discarded as a failure. At the present time emetin hydrochlorate is being used more or less extensively, based upon the theory that the endomeba is the causative agent. A good deal of this has been done by both dentists and physicians indiscriminately, and because it was popular, and will experience a

*Read before the Jefferson County Medical Society.

reaction if it is not already doing so. No treatment has ever been employed with success that has not been accompanied by the local surgical cleansing of the teeth and polishing surfaces of same and many of the most striking cures have been brought about through this means alone.

Let us now consider the second phase of our subject, its relation to systemic disturbances. Black tells us that "The loss of the investing tissues and final loss of the teeth constitute only the local side of the picture of mouth infection. There is another side that is even more important. During the progress of the diseases of the investing tissues of the teeth whether caused by salivary calculus, or in the form of pus pockets alongside the roots, or chronic alveolar abscess, there is a continuous inflammation of low degree and almost continual suppuration and the pus formed usually is itself undergoing putrefactive decomposition through the growth of the saprophytic organisms.

It is here that the dentist has been observing the local manifestations—accumulation of calculus, gingivitis, swollen and receding gums, the exudation of pus, the loosening and loss of the teeth, but saw nothing in it but the ultimate loss of all the teeth. The physician saw remote disturbances in the stomach, joints or heart, yet did not connect these conditions with the focus of infection in the mouth. But through the research and writings of Dr. Wm. Hunter of London, and Drs. Billings and Rosenow of Chicago, the connection has been made, and we are being drawn closer together in a common and combined duty to humanity. Our professional horizons are enlarging and we are finding that we are not working in separate fields, but in different parts of the same great field.

Miller tells us that there are six avenues of infection through which mouth bacteria may enter the human body: (1) through break in continuity of mucous membrane; (2) through gangrenous tooth pulp; (3) absorption of poisonous waste products of bacterial formation; (4) inspiration of slime, mucous, etc., loaded with bacteria; (5) swallowing of microorganisms and (6) through intact soft tissues.

Now when we remember that in a severe case of pyorrhoëa there may be as much as eight square inches involved in this suppurative process, each inch teeming with its millions of germs, with one or all of these avenues of ingress into the body open, we are not surprised that its baneful effects is far reaching.

The tonsils have been designated as portals of infection, but in many cases they have received their infection, and have been fed by

a septic oral cavity, if not a definite pyorrhoëa condition.

A local surgeon recently operated for gastric ulcer and feels certain that he can trace the cause to a pyorrhoëa mouth reeking with all sorts of filth and pyogenic organisms. If the mouth—the first three inches of the digestive tract—is involved with loose teeth, bleeding gums, and a flow of pus, thus giving a saliva loaded with millions of such germs as staphylococcus, streptococcus, typhoid bacillus, colon bacillus, etc., need we be surprised to hear of trouble further down in the form of gastritis, gastric ulcer, appendicitis and the various forms of intestinal disturbances. The time was, and may be in some quarters yet, though it is hoped, is rapidly passing when these conditions were treated with not even as much as a look into the mouth, except to see the tongue. Not only does such a condition threaten the welfare of the digestive tract and the whole system through it, but the respiratory tract and apparatus as well. We know that the pneumococcus and sometimes the tubercle bacillus are found in the mouth, but become more virulent under surroundings as here pictured, and more severe in their effects with a mixed infection which is very eminent.

Post-operative pneumonia, when these conditions prevail, may not be unexpected. It is gratifying to note however, that throughout the country, mouth toilet is being urged by surgeons as a preparation for the operation under a general anesthetic.

We are learning that the rheumatisms that was supposed to aggravate the pyorrhoëa in some instances is being brought about by this infection. Certain forms of arthritis in remote parts of the body have been traced to apparently mild conditions of pyorrhoëa alveolaris. The tests have been conclusive by producing a like condition in guinea pigs by infection from the suspected pus pockets. Endocarditis as a result from pyorrhoëa has been verified in the same way.

We can not only trace many specific disturbances back to a septic mouth as the foci of infection, but there are many cases which show that the general health is undermined by the oral condition. As an example of this allow me to cite one case as reported by Marshall. Miss S. public school teacher, aged 40 reported complaining of loss of appetite, a bad taste in mouth, an excessive flow of saliva causing frequent swallowing, pain in stomach after eating, with considerable flatulency, and a burning sensation in stomach when empty, nausea in mornings, but no vomiting. Every afternoon felt feverish, languid and tired. Had frequent attacks of constipation and diarrhoea and accumulations of much

gas in the stomach which caused much discomfort. Has decreased in weight, complexion pale and muddy. Pulse normal with no evidence of fever. Mental condition not good; was melancholic and dejected; had lost interest in work and did not expect to live long. Mouth in very dirty, unsanitary condition, teeth had not been brushed for many days on account of bleeding gums. Food debris and salivary calculus covered all the teeth; gums swollen and red and on pressure, bloody pus flowed out. Had frequent attacks of tonsillitis. The treatment consisted in the thorough cleansing of the mouth and teeth and the use of such agents as are ordinarily used to establish asepsis and in three months after her mouth was put in a sanitary condition she was a well woman.

More might be said but time forbids. Dentists are realizing as never before the seriousness of the situation we face. While much is being done toward eradicating this disease, yet the greatest work of all is along the line of prevention. We will never achieve our greatest success until we have built the fence—educated the public along the line of oral cleanliness. The dentist cannot do it alone, but must have the help of the physician with his broader knowledge of the human body and his wider touch with the general public.

REMOTE INFECTIONS WHICH HAVE THEIR ORIGIN IN THE MOUTH.*

By R. HAYES DAVIS, Louisville.

The dangers to remote portions of the body originating in mouth infections are so numerous and so serious that we can not emphasize too strongly their importance. This field of medicine is a comparatively new one, and it has opened up many opportunities for relieving mankind of ailments that were difficult and often impossible to relieve otherwise, and that were not infrequently fatal.

There are in the mouth various locations that are most favorable to the maintenance of chronic infections. These infections in turn frequently pass unnoticed for years and constantly distribute to the blood stream and lymphatics pathogenic bacteria and their toxins. The principal localities of these infections are the teeth, the tonsils, and the accessory sinuses. It is now well known that innumerable abscesses occur about the roots of the teeth with absolutely no local symptoms, and their diagnosis must be made by X-ray examinations. Tonsils can frequently have lurking in their bases masses of bacteria responsible for serious disorders and yet their outward appearance may be very satisfactory,

and the individual may never suffer from tonsillitis or sore throat. Every rhinologist knows how difficult it is in some cases to eliminate absolutely the possibility of sinus infection. Yet when many of these hidden areas of infection are found and eliminated there have been such remarkable results obtained in so many remote infective conditions that there can not longer be any doubt as to their frequency as a causative agent. It is always a physician's first duty to look for the cause of an infection, and if one is not easily found, then the mouth should be explored most carefully, and often he will be rewarded by finding the source of the trouble without going further.

The principal disorders originating from the mouth are nephritis and pyelitis, various articular inflammations and endocarditis, suppurative conditions in various parts of the body more frequently about the neck and head, adenitis, inflammations of various adjoining structures, iritis, gastric ulcer, tuberculosis and numerous others.

Tonsillitis was formerly considered a trivial disorder aside from the local pain and general disturbances lasting a few days. We now know that the cases of nephritis that occur during the course of this infection are numerous. Most cases are mild and usually overlooked but occasionally a severe one may occur with edema or uremia. If we did our duty we should examine the urine and take the blood pressure in every case of tonsillitis that comes under our observation. Other cases of nephritis develop insidiously from chronic tonsillar infections and show their relationship by clearing up with removal of the tonsils after having resisted all other treatment previously. It is my opinion that pyelitis is more often overlooked than almost any other serious condition. I have seen several cases of infections of the pelvis of the kidney with high temperatures that have been treated for typhoid fever for one to three weeks. In these cases pyelitis was not considered, and the urine had not been examined for pus. There are many other chronic cases that cause general debility and slight symptoms that escape attention. In cases of pyelitis blood and lymphatic infections are much more frequent than direct extension through the ureters. Dr. Nice of Birmingham reports an interesting case: Two diagnoses of tuberculosis were made. "This was a child nine years of age who bore the ear-marks of a chronic infection. He was anemic, thin and showed every evidence of physical fatigue. He had an afternoon temperature for weeks of from 99 to 100.2 degrees. He had a cough, had lost weight; his mother had found him

*Read before the Jefferson County Medical Society.

drenehed with perspiration at night, and she was in despair. Fluoroscopic examinations and tuberculin reactions were negative, and no physical signs could be elicited to prove a tubercular infection. His urine showed quantities of pus on repeated examinations, and his teeth were carious. The recovery of this case was like a miracle soon after the dentist had completed his work and he was given urinary antiseptics. The boy is now well and robust."

With regard to joint affections the literature is full of reports of various types of infections that have cleared up after removing a focal infection from the nose, throat, or teeth. The relationship between acute tonsillitis and rheumatic fever and chorea has been known for years. We have constantly seen many cases where the severe joint symptoms of acute rheumatism have followed an attack of tonsillitis. Formerly the two conditions were attributed to the same cause rather than holding the tonsil responsible for the infection of the joints. So many cases, however, have cleared up so promptly after the removal of diseased tonsils that there is no justification in allowing them to remain in individuals suffering from rheumatism. In many other inflammations of joints the same germ has been found in the exudate as was found in a tooth abscess, and after the elimination of the tooth condition the joint inflammation has subsided. This relationship not only applies to the ordinary acute or subacute forms of arthritis but it also applies in certain instances to that dreadful malady—arthritis deformans which is so resistant to ordinary forms of treatment. In these cases sinus disease is not infrequently at fault. There is an interesting case reported by Dr. James Bordley of Baltimore that seems to demonstrate beyond a question of doubt this relationship. "This patient had pronounced changes in his joints, with rarification of the bones above and below the cartilages in knees and elbows and marked deformity of the hands. I operated on both sides of his nose and found both frontals and sphenoids devoid of mucous membrane, and the former filled with a brownish gelatinous mass. His improvement was rapid for a month, he then suffered a serious relapse. Upon investigation I found that the right frontal sinus was divided into compartments, and a small opening leading from one of these compartments into the main cavity had become blocked. The partition between the two was broken down; the patient's recovery was rapid and permanent. If I may digress a moment it may interest you to know that when this man was operated upon sitting on the side of his bed he could not lift his legs except with his shoes off, their weight ex-

ceeding his strength, in six months he wrote as follows: 'I have this day carried on my back for a distance of over a mile nearly a hundred pounds of game and ammunition after a horseback ride of over forty miles.'"

Endocarditis is so closely related to the acute rheumatic infections that the same principles apply to many forms of this that apply to inflammations of the joints. We should in every case seek an avenue of entrance of the infection and eliminate it if possible.

The various conditions that may arise about the head and neck from focal infections are numerous and are familiar to all. The frequency of inflammations of the antrum following suppurations of the upper teeth need only to be mentioned. The same is true of adenitis of the neck with either acute or chronic tonsils or with infections of the teeth. Certain forms of adenitis are tubercular in origin, and the frequency with which tubercle bacilli have been found in diseased tonsils shows a definite relationship. Tubercular cervical glands may in turn lead to tubercular mediastinal glands with involvement of the lungs or miliary tuberculosis. That usually fatal malady known as Hodgkins' disease is attributed frequently to infections about the mouth. Ludwig's angina, a most dangerous condition, usually follows definite inflammations of the mouth. Orbital inflammations, brain abscesses, meningitis, and lateral sinus thrombosis follow not infrequently infections of the bony cavities. Certain cases of iritis have recovered after removing a distant pus focus.

Even thyroid enlargements are now being considered as possible results of mouth infections. Dr. Charles H. Mayo in reviewing five thousand operations for these diseases advanced the theory that the beginning of thyroid hypertrophy might be a defensive effect of the organism to resist toxic invasion. And just at present I have been told, although I am not familiar with the work, that Dr. Frank Billings has found a large number of enlargements of the thyroid to disappear after removal of diseased tonsils or other infected foci.

Many nervous disorders have been reported as relieved by correction of unhygienic mouth conditions. These include neurasthenia, hysteria, neuritis, various neuralgias, and even insanity.

Certain cases of gastric or duodenal ulcer have shown the same pathogenic bacteria to be the cause as are usually found in mouth abscesses.

I should state also that cases of arteriosclerosis should have all sources of toxin absorption eliminated, and these include all forms of mouth infections. There have been a number of cases reported that have shown

a decided decrease in blood pressure after removal of a toxic focus.

Lastly I shall mention with what great frequency every physician sees the sallow, anemic, nervous and weak sufferer from pyorrhoea improve after extraction of the teeth or proper treatment to lessen the constant absorption of bacteria and their toxins. The improvement in the health of children after removal of diseases tonsils is frequently almost miraculous.

The discussion of this important subject could be prolonged almost indefinitely. I have made no attempt to cover it completely, as this would be far from possible with such limited time. I have endeavored only to show sufficient reasons why in every infection, wherever it may be, a source of entrance should be sought. In many cases this is impossible even at autopsy, but if painstaking examinations are conducted in every case, the mouth will present a goodly share of origins of remote infections.

CONCERNING DENTAL MAL-OCCLUSION.*

By H. B. TILESTON, Louisville.

Dental mal-occlusion is a subject which should be intensely interesting to all who have the welfare of children at heart. Perhaps seventy per cent. have some form of mal-occlusion. Of these, thirty per cent. are mouth breathers.

An astonishing lack of interest has been shown, regarding the importance of correcting this condition, by a considerable portion of the medical and dental profession. This may be partially due to the belief that orthodontic treatment, while of value in remedying certain unsightly conditions, is of no real assistance in improving the general health. That this view is an incorrect one will be appreciated if we but stop and consider some of the conditions which might arise as the direct result of dental mal-occlusion.

The most frequent sequel is loss of function. If this be confined to one tooth, the efficiency of the masticatory apparatus would be reduced by just that much. However, the teeth involved are usually more numerous and besides being useless in themselves, or partially so, they often curtail the usefulness of the others by interfering with the movements of the jaw necessary for the proper mastication of food. Also mal-occlusion by affording many lodgment places for food which are difficult to cleanse pre-dispose the teeth to decay. Many teeth so affected

ultimately become foci of infection and as such are a distinct menace to health.

Often teeth subjected to abnormal forces of occlusion become the seat of a periodontitis. If not relieved degeneration occurs and a pyorrheal condition results, this not only exerting a morbid influence upon bodily health but resulting eventually in the loss of the tooth.

And last but most important are these cases where undeveloped arches and perverted forces of occlusion cause or maintain a condition of similar under-development in the nasal passages. It is immaterial whether adenoids and tonsils were the cause or result of this condition. Or whether nasal stenosis be complete or partial. Or if the mouth breathing be habitual or intermittent.

We assume a mal-occlusion of this type to exist. The patient is a sufferer from insufficient or improper oxygenation and mal-nutrition. The mal-nutrition is more pronounced in the habitual mouth breather as he must necessarily bolt his food in order to make room for the passage of air. The question arises, what can orthodontic treatment do for such a condition? There is no doubt in the minds of any of you, I am sure, as to the feasibility of moving the teeth in the alveolar process. When, however, we speak of stimulating a growth of the associated structures in the nose you accept our statement, if at all, with a grain of salt. Nevertheless, we do often get results in re-establishing normal function to the mouth and nose where the rhinologist has failed. It is apropos here to state the conditions and forces existent in the normal mouth which influence nasal development.

While at rest, the teeth of the opposing jaws are in contact or nearly so. The tongue lies within the vault of the superior arch, the tip being quite firmly pressed against the anterior portion, thus stimulating longitudinal and transverse development. The lips are closed exerting a passive force which becomes active during the act of mastication and deglutition, not only are the lips compressed, but the teeth are brought into firm occlusion and the tongue is pressed firmly against the entire palate dropping again following the act thereby creating a partial vacuum between itself and the roof of the mouth. This brings atmospheric pressure to bear upon the floor of the nose stimulating a flattening and downward growth of the palate thereby increasing the perpendicular diameter of the nose. During mastication, the lower arch being smaller than the upper exerts a general broadening influence which is counterbalanced by the locking of the lingual cusps of the superior with the buccal cusps of the in-

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ferior teeth and the lateral pressure of the muscles of mastication and lips. The force of occlusion is transmitted through the process direct to the true bone of the superior maxillae. Tongue pressure forcing food between the opposing occlusal planes assists in stabilizing the teeth. Such a condition of perfect balance of forces as exists in normal occlusion precludes any possibility of tooth movement. Therefore, at the instant of contact of the jaws, the full force of occlusion is brought to bear upon the origin and insertion of the muscles of mastication. This force has been determined by Dr. Black, to range from fifty up to three hundred pounds varying according to muscular development and the character of food used. This force being exerted upon the prominences of the cranium and maxillae and the fulcrum being at the point of occlusion of the teeth of the opposing jaws, it can readily be seen how lateral development of the nose is accomplished through a pulling away from each other of the superior maxillary bones. While this force is the primary factor all the other conditions must be present also in order to attain or maintain normal conditions in the mouth and nose. We are assuming there is no obstruction to normal nasal breathing.

In mouth breathers, these activities of nasal development are absent or perverted in their application. The mouth is held open, the tongue is withdrawn from the vault of the superior arch, the lips are separated, the upper superior dental arch being deprived of tongue drawn upward and the lower pendulous. The and lip pressure and the stabilizing influence of the forces of proper function, the force of mastication being a negligible quantity in these cases as food must be bolted in order to make room for the passage of air, is unable to withstand the lateral pressure of the muscles of mastication. The result is a bi-lateral collapse of dental arches instead of a lateral expansion of the maxillae. The anterior teeth are pushed forward and the palate is prevented from developing downward causing septal deviations. These high vaulted, narrow "V" or saddle shaped conditions of the superior arch accompanied by a distal relationship of the lower jaw are typical of mouth breathers.

Early operative interference on the part of the layngologist would have, if instituted soon enough, prevented this condition. Or, if the result of a malicious habit, had the habit been broken soon enough, these conditions would likewise never have come to pass. If, however, malformation has occurred operative measures will be only partially successful. In well established cases of years stand-

ing tonsil and adenoid removal is of no avail. Even a submucous resection of the septum and removal of the inferior turbinates frequently fails to establish normal nasal breathing. This is due to the fact that the tongue when the mouth is closed is forced back into the pharynx, there being insufficient room within the dental arches, pushing the soft palate against the posterior wall making nasal breathing impossible. The very best result to be hoped for is to make the nose a supplementary air passage to the mouth.

What can orthodontic treatment do for these cases? It will do this:

By expansion of the dental arches normal or nearly normal occlusion can be established, up to probably the twenty-fifth year, resulting in an improvement of masticating efficiency and improved nutrition. The tongue is allowed to occupy its normal position when the mouth is closed. By reducing the protrusion of the superior anterior teeth the lips can be closed without effort. Most important of all we have established a condition in the mouth whereby the exercise of the muscles of mastication in performing their function exert a powerful stimulating influence upon nasal development. To my mind this is the logical, normal, and only way by which normal function of the nose can be established. That it is efficient, my experiences during the nine years I have devoted myself to this work bear ample testimony.

I have often heard the doubt expressed as to the possibility of expanding the nose through exerting pressure upon the teeth with an orthodontic appliance. We do not do that. I hope I have made that point sufficiently clear. Nasal space is gained as the result of orthodontic treatment establishing the forces of normal occlusion and not as a result of pressure being transmitted through the teeth to the associated structures in the nose.

Many lives are needlessly marred and people made sensitive and unhappy as the result of dental mal-occlusion. Interference, surgical, therapeutic, orthodontic, or just plain advice timely given would have spared them many distressing conditions.

The physician has exceptional opportunities for observing children during their development period. At this time an ounce of prevention is worth a pound of later cure. In this age of prevention, are we doing our full duty to our patients, and our calling, if we fail to recognize the importance of dental mal-occlusion as an etiological factor detrimental to the general welfare of the body. I should like to have the medical men take an active part in the discussion of this paper.

I thank you.

INTRAVENOUS USE OF RADIUM IN HIGH BLOOD PRESSURE.*

By R. R. ELMORE, Louisville.

(1). To determine the general merit, or efficiency of a therapeutic procedure the limitations and indications for application must be appreciated.

(2) To clarify the subject of high blood pressure varieties—take the liberty of calling your attention briefly to the following classification on that subject by Arthur R. Elliott of Chicago.

(a). Secondary or symptomatic high blood pressure as in increased intracranial pressure, aortic insufficiency, asthma and emphysema, chronic thyroidism, diabetes mellitus and syphilis.

(b). Neurogenic or spastic high blood pressure, which may occur about the menopause, in neurotic women, or individuals under severe nervous strain, or victims of insomnia.

(c). Essential or non-albuminurie, is a clinical type, the recognition being made by exclusion, a latent nephritis, being usually present.

(d). Nephritic high blood pressure being accompanied by the characteristic symptoms and findings of inflammatory lesions of the kidneys.

(e). High blood pressure in heart failure. Some cases of cardiac failure are attended with rising systolic pressure.

The three cases observed in this report represent diverse social conditions—one being the mother of several children, and on whose shoulders the burden of a livelihood pressed heavily, another raised in the cradle of comfort if not luxury, and whose care and maintenance through life had been provided for but all three present a similar physical conformity, being inclined to obesity, of stocky build, and plethoric temperament. No detailed examination is attempted in this report. These patients had received customary treatment of rest, restricted diet, increased elimination, alteratives, alkaline remedies, plebotomy and vaso dilators during exacerbation of symptoms.

Case No. 1. Mr. H., age 58, belonging to nephritic group.

History of myalgias in various groups of muscles, transient areas of anesthesia, much discomfort in hands, increased area of cardiac dullness, uratic deposits about some joints of the fingers, several systolic readings ranged from 180 to 190.

On August 5, 1915, 100 micrograms of radium element in form of a soluble chloride

was given intravenously. Beginning August 15th, two micrograms of radium chloride in 60 c.c. of distilled water was given on alternate days, for twenty-four days. Patient was uncertain as to any betterment in subjective symptoms, blood pressure presented a lower range, and in early December registered 158 systolic.

Case No. 2. Miss V., age 67. Came under observation in 1912, complaining of sensation of fullness in head often followed by nose-bleed, and tingling in arms, pain in top and back of head, severe cramps in limbs, short periods of unconsciousness, shortness of breath, failing strength, insomnia, nausea, very restless, severe pain in lower lumbar region.

Enlarged area of cardiac dullness, reflexes exaggerated, systolic blood pressure 250, urine rich in uric acid crystals and urates, but no albumin or casts.

Application of radium treatment as in preceding case made July 22, 1915; after ten days there was a gradual amelioration of symptoms.

On March 13, 1916, patient reports she has been free from most of her subjective symptoms since the middle of August, but recently the tendency of pain in her back was becoming more persistent. Systolic blood pressure 200 m.m..

Case No. 3. Mrs. F., age 63. Mother of eight children. Sensation of fullness in head and backache accompanied frequently with nose-bleed about every four weeks, since the menopause which occurred at 41, stinging sensation in arms and hands, muscle cramps in limbs, severe pain in lower lumbar region, small areas of skin are very sensitive, patient very irritable and easily startled, attacks of vertigo which has caused three severe falls, profuse night sweats, reflexes exaggerated and systolic pressure 200 m.m.

Radium given July 4, 1915, as outlined above. After two weeks there was a gradual amelioration of symptoms and patient enjoyed an improved state of health.

March 15, 1916 systolic blood pressure was 170 m.m. and patient states there had recently been a return of pain in lower lumbar region.

In the use of this form of radium and all glass syringe was used, the instrument being sterilized in distilled water, the area to be punctured was painted with iodine.

In above cases was unable to observe a decrease in blood pressure under seven to fourteen days—most observers report a decrease on second or third day, additional experience and accurate observation may prove the latter true.

*Read before the Jefferson County Medical Society.

Palpation method of estimating blood pressure was used in these cases.

From the relief afforded in two cases out of three, we have reason to feel that radium chloride may be a last remedy in obstinate cases, offering prospect of at least temporary relief.

AN ANALYSIS OF THE ANAPHYLACTIC REACTION.*

INTRODUCTORY.

By VIRGIL E. SIMPSON, Louisville.

Since only members of the protein group cause this reaction, so far as now known, it may quite properly be termed a protein hypersensitiveness. With the growing importance and use of sera in the therapy of transmissible diseases interest attaches to anaphylaxis not alone for the pharmacologist in the laboratory but for the practitioner at the bedside as well.

For the purpose contemplated in this study only the phenomena, pathologic and clinical, which present themselves on reinjection of a given protein will be considered. The condition termed serum sickness, interesting and important as it is, will not be included. Neither will the sensitized state termed passive anaphylaxis induced by injecting serum from a sensitized animal into a non-sensitized one be discussed.

Further, we have elected to use the term as including both the sensitized condition and the symptoms resultant acknowledging, in passing, that the name is often used in literature limited to the state of sensitization alone.

Finally, we wish to emphasize at the outset that the clinical phenomena observed in an anaphylactic subject are not *per se*, diagnostic. The finding of the Boas-Oppeler bacillus in lavaged stomach contents in an overwhelming proportion of cases of gastric carcinoma does not justify the conclusion that such carcinomata are caused by this organism. A germ must fulfill the requirements of the well known Koch's law before a scientific profession would accept it as an etiologic factor; chills, fever, perspiration and a progressive anemia may suggest malaria, but until all the facts, including the findings of the plasmodia in the blood, are elicited is a diagnosis of malaria warranted. Likewise, the phenomena common to anaphylaxis must not be deemed conclusive unless they are the logical result of a definite procedure viz.: reinjection of the same foreign protein after a definite interval (1) A recognition of these somewhat

arbitrary limits and intents will be of value in such discussions as may follow:

EXPERIMENTAL ESTABLISHMENT OF THE REACTION.

Sensitization: When a definite quality of any soluble foreign protein is introduced into an animal by any route no effects are apparent and the animal behaves in all respects similar to the control animals. Its appetite, digestion and other body activities show no alteration; in other words the foreign protein is apparently innocuous. Should second and third or more doses be given at intervals of from two to five or six days the results remain negative, clinically. But when a longer interval elapses, say two or three weeks, with the reinjection of the same protein in the same quantity as used initially, serious and even fatal symptoms will be manifested which can be interrupted only by recognition of the fact that while the first dose apparently was without effects, in reality it had induced a tremendously profound change, a change that has converted innocuousness into toxicity, an alteration that has affected, vitally, the ability to care for the foreign substance.

Sensitizing Agents: Any soluble protein which is foreign to the animal under observation, of either plant or animal origin, will produce this sensitization provided, only, it enters the circulation unaltered. This latter condition, the *unaltered* structure of the protein is an important consideration for while resisting many manipulations such as drying and redissolving, the addition of chemicals, etc., certain other procedures will destroy it. Second and third, the proteolytic ferments, fortunately, destroys the sensitizing power; if this were not true we would be subject to the possibilities of anaphylaxis each time we ate a protein food which had not been included in our diet for a few weeks. Heating to 212 degrees F. for an hour destroys it almost or quite completely. Summed up it may be stated that the products resulting from disintegration of protein, which are absorbed, are in the main, incapable of inducing sensitization. Milk serum, blood cells, egg albumen, gastric juice, bile, pancreatic juice, organ extracts, are a few of the proteins of animal origin while oil, seed extracts, bacteria, yeast cells, and pollen from the vegetable kingdom are but a few of the many protein substances that have been used experimentally to establish sensitization.

Specific Nature of Sensitization: A reaction can only be obtained when the same protein is reinjected. If an animal is sensitized with egg albumin, the subsequent injection of a blood serum will not induce anaphylaxis.

*Read before the Jefferson County Medical Society.

If, however, the protein from the closely related species be used, the specific reaction presents wider limitations, e.g.; an animal sensitized with albumin from goose egg will react if albumin from a duck egg be used for the second injection. The specific nature of protein reaction depends more upon the chemistry than the biology. (4) Hemolysins and agglutinins are specific in the same fashion.

This specific characteristic extends, quite unexpectedly to proteins of body organs. (5) A guinea pig sensitized with horse serum will not react if the second injection be protein from horse liver or nerve tissue. (6) A difference between the red blood cells and the serum obtained from the same animal obtains as specifically as if derived from two animals of wholly different species. A closer study of the specific nature of protein sensitization will be essayed under the caption, "The nature of the reaction."

Methods of Induction: Whether sensitization is established experimentally or clinically the protein is commonly introduced into the body by either the subcutaneous, intraperitoneal or intravenous route. It is of interest, however, to remember that the condition may also be induced by inhalation, intunction or the vaginal and rectal routes as well.

The sensitized state may also be inherited which leads to the speculation as to its relationship with some of the idiosyncrasies of the human family.

Incubation Period: The time required for the changes to take place in the body before a reinjection will cause symptoms is determined by the species of animal, the subject of experimentation, the method of administration and the size of the dose. The sensitiveness develops comparatively gradually, reaches a maximum and may decline partly or wholly. It is analagous, in this respect, to the curve of the opsonic index. The incubation period has been fairly accurately worked out experimentally on animals by giving the second injection at varying intervals until the earliest time of reaction was determined. Most observers are agreed on the order of development with the guinea pig first, man second, rabbit third, and dog last. In the guinea pig the average is ten days, man twelve, rabbit fifteen and the dog twenty. In our series some of the guinea pigs reacted as early as six days.

There has been no uniformity as to the time sensitization continues. Anderson and Rosenan³ found it lasting through life in some pigs, which is about three years. Darling⁷ observed the reaction in one of his patients

five years after initial dose of a serum. Rabbits have died on reinjection six weeks after initial dose while Scott⁸ observed its disappearance as early as three weeks. The time immunity lasts after attack of the various transmissible diseases shows as wide range of variation.

Intoxication: The symptom complex occurring on reinjection marks the stage of intoxication. With this view clear in our minds we may refer now to what has been heretofore mentioned as the second reaction, or reinjection dose as the intoxicating dose. This dose may be given in the variety of ways mentioned under sensitizing dosage. For the production of the maximum effects the intravenous method is the one of election. The same amount as given for sensitizing will produce symptoms but to obtain acute exitus much larger doses are used.

THE NATURE OF ANAPHYLACTIC REACTION.

So soon as the above facts concerning the reaction were established the attention of investigators was naturally directed towards finding an explanation of their occurrence. Why did the reaction take place became an insistant query, to the solution of which scientists directed their energies. It cannot be said that any explanation yet offered fully satisfies all the demands for the truth but they have at least stimulated study and many facts of importance have been added to our knowledge thus clearing the confusion of much speculation. Many theories have been offered in explanation of the reaction phenomena; some have been exploded while others still have their advocates. There is, however, almost a unanimity of opinion that anaphylaxis is an intoxication and the responsiveness of certain cell groups to certain proteins determines the predominance of symptoms affecting that group. Thus the diarrhoea in dogs is a peripheral action due to increased contractions of intestinal musculature, congestion of mucosa and increased activity of the pancreas while the respiratory symptoms so strikingly prominent in the guinea pig are the result largely of asphyxia.

The parenteral digestion theory advanced by Vaughan⁹ offers at once the most logical and comprehensive explanation of anaphylactic reaction and will be the only one referred to in this connection. It may be briefly stated thus:

When a foreign protein is introduced into the alimentary canal it is broken up into amino acids by the digestive ferments, loses its characteristic structure, is absorbed and immediately is reconstructed into special proteins from which each cell obtains its food

through the action of its own digestive secretion, splitting up the food in such fashion as to supply its own needs. Thus all body cells are able to choose the material for their food through the activity of their own digestive ferments. This is termed cellular or parenteral digestion. It is a physiological activity in which the food, the cleavage agents and the body cell are constant.

If, however, a foreign protein finds entrance into the tissues or circulating media which for some reason has escaped these preparatory steps and retains its original chemie structure the body cells proceed to construct a ferment to digest it. This ferment is specific for the protein to be digested alone and after the process of digestion is completed it remains in the body cells as a zymogen. Should the same protein at a later period again find entrance in an unaltered state it activates the stored, specific, proteolytic zymogen and digestion again occurs. Digestion in the first case was necessarily slow because the ferment had to be manufactured therefore no inconvenience is experienced. The digestion of the later alien is quite rapid for the ferment is already in existence and the cleavage being quickly liberated a reaction ensues.

The second essential feature of the parenteral digestion theory of Vaughan is the conception that each protein molecule consists of two portions, a toxic and a non-toxic element¹⁰. Vaughan terms the toxic portions, the "primary group" and the non-toxic, the "secondary group." The primary or poisonous group is, so far as known, the same, physiologically and essentially the same chemically in all proteins. The secondary groups are unlike in the various proteins and when freed by the cell zymogen produce sensitization. The toxic group is inert as long as attached to the secondary group but when liberated by the ferments it acts as a poison and produces anaphylaxis.

The question quite naturally arises, if we accept this conception of the dual nature of proteins:

Why are we not poisoned by the proteins of our food when split up by the alimentary proteolytic ferments? Proteins are not absorbed as such from the alimentary tract but must undergo cleavage by the ferments in the digestive canal. This liberates the toxic group of the protein molecule which is not a rapidly diffusible substance hence the system can not be charged by a large dose. In addition to this, further cleavage obtains by digestive system ferments which renders the toxic group inert. In cellular or parenteral digestion of proteins the toxic group is

liberated in contact with the cell structure and injury results.

Finally, it may be remarked that the early observations of investigators inclined them to the view that the central nervous system was the seat of the anaphylactic changes and symptoms in other organs and systems were dependent on these changes for their occurrence. Sufficient work has been done recently, however, to undoubtedly establish the fact that alteration of structure in body cells other than the central nervous system occur and of sufficient degree to explain the symptoms. Typical cardiac anaphylaxis can be caused in the excised heart of the rabbit as is also true after destruction of the cord, basal brain and medulla. Excised loops of intestine can be made to show anaphylactic contractions. Dilation of the air cells and immobilization of the lung can be induced by perfusing the excised organ with the sensitizing protein. The V. Pirquet, Moro, Mantoux and Wolff-Eigner reactions obtained by the local use of tuberculin in tuberculosis are evidences of purely local reaction. These proofs do not disprove the assertion that the central nervous system does suffer reaction changes in kindred fashion with other body cells and that symptoms incident to such changes do occur but rather establish as facts, first, that the central nervous system is not of primary importance in the explanation of anaphylaxis and second, that any cell structure may be altered and affected by it.

SYMPTOMS AND PATHOLOGY.

The symptoms and pathological changes incident to anaphylaxis vary as to prominence in different animals. In the guinea-pig respiratory symptoms predominate, circulatory in the rabbit, gastro-intestinal in the dog. While in man, cutaneous and glandular symptoms, edema and leukopenia are most common.

Gastro Intestinal: The dog, in a few minutes after injection, begins to retch and vomit; fecal and blood stained vomitus may occur. In a short time diarrhoea begins; the feces are fluid in character and often contain blood. The vomiting may disappear in twenty to thirty minutes but the diarrhoea is likely to continue for several hours. The peristaltic waves are tremendously increased and can be easily seen through the abdominal wall. Post-mortem reveals dilated blood vessels, swollen mucosa and minute hemorrhagic areas throughout the entire canal, but most abundant in stomach and small intestine; on the stomach they are most common along the greater curvature. Vomiting does not occur in the rabbit as its stomach contents are semi-solid.

Circulatory System: The heart in the guinea pig continues to beat after cessation of breathing but while the contractions are forceful there is dissociation between the ventricular and auricular systoles. This lack of auricular rhythm is only partial and is believed by Auer and Lewis¹¹ to be due to asphyxia though according to Sherrington¹² this can not be entirely so since partial heart block occurs in both rabbit and dog without asphyxiation. Cardiac failure is the cause of death in the rabbit. This failure may be independent of failure of blood pressure and faradism has practically no effect. Irregularities in the dog are less frequent. The rate varies with the different animals and the period of observation. Primary increase in rapidity with or without increase in amplitude is shortly followed by a progressive increase in diastole period and diminishing amplitude.

Hemorrhages are the most constant anatomical changes and were first described by Gay and Sonthard¹³. The greatest number are found at the apices and are both subpericardial and endocardial. Those occurring in the endocardium of the left ventricle almost uniformly involve the bundle of His, though the papillary muscles are usually involved also.

The left ventricle is the seat of greatest involvement and the auricles show comparatively few. They vary greatly in size. Convulsions do not explain their occurrence for anesthetization does not prevent them but are rather the result of constriction of the smaller veins. Such constriction interferes with free return of blood during cardiac contraction and the capillaries rupture. Heubner¹⁴ believes they are made possible during cardiac contraction by a damage to the capillary wall by the reaction. The cardiac walls feel firmer and the endocardium becomes tougher and can be stripped off less easily. Constriction of arteries in other parts of the body occur giving them a beaded appearance.

The blood pressure falls pronouncedly in the dog, often as much as 80. m.m., reaching normal again in a few hours if the animal survives. In those animals in which asphyxia with death supervenes a rise is observed as in asphyxia from other causes to be followed by a fall as the end nears.

The blood presents some fairly constant changes. The coagulability time is lengthened and the clot eventually formed is less firm than normally. A leukopenia appears during the anaphylactic reaction due to an almost complete disappearance of polymorphonuclears. A slight increase in the blood platelets and mononuclears occurs with an eosinophilia. During the incubation period

a moderate leucocytosis obtains. The lymph is increased in quantity and shows delayed or absent coagulability.

Respiratory System: Few more striking pictures can be seen in Laboratory work than the anaphylactic lung of a guinea pig. Usually in less than a minute after an intravenous injection of the second dose of a foreign protein exaggerated respiratory efforts are observed while the tambour shows a rapidly diminishing range of amplitude and finally no air enters or leaves the air cells. On autopsy the lungs are found completely distended, filling the chest space and often show the indentations of the ribs; they do not collapse even after removal, will not sink in water and are of a bluish color. Macroscopically and microscopically the early evidences of pulmonary edema are observed.

Hemorrhages are not uncommon and occur on the surface. This condition is not dependent upon changes in the nervous mechanism but rather to a tetanic contraction of the muscles of the bronchioles closing the lumen of the air vessels and death is due to asphyxiation¹⁵.

Contrary to expectations this pulmonary picture is not observed in all animals to such a degree and in some species is entirely absent. In the dog, for example, the lung shows little emphysema and no hemorrhages. Marked dyspnea, cyanosis and asphyxia convulsions have been reported in man by von Pirquet and Schick¹⁶.

Glandular System: Round cell infiltration of connective tissue with degeneration or necrosis of the tubules have been found in the kidney. The adrenals show an altered color reaction to formalin and some believe the fall in blood pressure is due to a fixation of adrenalin in the gland structure. Necrosis of the liver has also been observed and some interesting work has been done, initiated by Manwaring¹⁷, which tends to show that the liver exerts an important influence in sensitization and intoxication especially with reference to blood pressure.

Nervous System: As already stated the role of the nervous system is less important than was at first believed. Increased irritability in some nerves, reduced conductivity in others, occasional hemorrhage in brain medullated fibres in the mesentery have all been described. But the occurrence of either functional or organic changes is not great and does not go far to explain the symptomatology of the phenomena. The anemia of the higher centers is secondary to the drop in blood pressure and they in turn have nothing to do with the inception of that drop¹⁸.

The cardiac changes in anaphylaxis can be

produced after total destruction of the brain, medulla and cord; the same holds true of the lung. Dale and Schultz produced anaphylactic contraction of both intestine and uterus after complete excision.

These evidences of independence of brain and cord influence in anaphylactic manifestations of various organs must not be interpreted in terms of absence of reaction in the central nerve axis itself but merely to indicate that the central nervous system is not essential in the artificial production of anaphylactic changes elsewhere.

CLOSING DISCUSSION.

Bacteria are labile proteins. Egg albumen, etc., are stable proteins. One is an active state, the other resting, but both are proteins composed of a toxic or acid and non-toxic or basic group. The acid group produces the same poisonous effects whether of living or dead protein origin. The basic or non-toxic group produces specific immunity when of living or germ protein and specific susceptibility when of stable origin; both the immunity and susceptibility consists in developing in our bodies the power of splitting up specific proteins.

In light of these postulates our conception of the effects induced by transmissible diseases must be radically altered. We have believed that the lesions characteristic of these diseases were due to the presence of the living, propagating germs. Now we know that dead proteins injected intravenously will cause these identical lesions, for each protein has its own predilection cell group; that the inflammation of bacterial origin is essentially a chemical process, an alteration of body cell molecules because of the affinity existing between some of the protein constituents of the body cell and some of the protein constituents of the germ cell.

The reaction is an artificially induced condition and interest in it for the clinician obtains in methods of its prevention in the use of sera. We lay down, in summary, the following:

1. A serum should not be administered except when imperatively needed.
2. Fresh serum should not be used.
3. Concentrated preparations are highly preferable.
4. Intravenous secondary injections are dangerous.
5. Chronic respiratory diseases are a contraindication to use of a serum to the extent that unusual care or an effort to desensitize should be instituted.
6. Heating to 132 F. diminishes danger of reaction.

7. Alcohol and ether narcosis.
8. Sodium chloride (1 c.c. sat sol.)
Barium chloride (50 mg. per kilo).
Atropin.
Suprarenal gland.
Chloral hydrate.
9. Injection of small dose (5 to 10 min.) wait 2 hours then inject full dose.

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Do You Know That

Light promotes cleanliness?

A clean mouth is essential to good health?

Physical training in childhood is the foundation of adult health?

The U. S. Public Health Service issues publications on hygiene and sanitation for free distribution?

Isolation is the most efficient means of controlling leprosy?

Headache is Nature's warning that the human machine is running badly?

Bullets may kill thousands—flies tens of thousands?

Obesity menaces longevity.

Life Extension.—The Department of Health of the City of New York is undertaking in a small way a new departure in preventive medicine. At an occupational clinic, special attention is given to the examination of workers in various occupations with a view to the discovery of incipient pathology of the heart, kidneys, lungs, etc.

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NEXT MEETING STATE ASSOCIATION.
HOPKINSVILLE, 1916

COUNTY SOCIETY REPORTS

Carroll—The Carroll County Medical Society met at Carrollton on May 10th, 1916, and was called to order by Dr. George Purdy. Minutes of the preceeding meeting read and approved.

The October date of meeting was changed to November so it would not conflict with any other district meeting.

Drs. Owsley, Grant and Gaylord C. Hall, of Louisville, and B. M. Ricketts, of Cincinnati, were elected to membership.

A. David Willmoth read a paper on "Normal Salt Solution and Its Dangers." Showing that this solution was capable of doing a great deal of harm in some cases and should not be used indiscriminately. This paper was ably discussed by Dr. Ricketts, who brought out some very interesting facts.

Afternoon Session.

Curran Pope read a paper on "Sacro-Iliac Disease and Its Treatment by a New Method. Showing that these cases could be relieved by the proper treatment when a correct diagnosis had been made, such as proper fitting corsets and bandages, etc., but that electric treatment had done more to relieve these cases where properly used.

This paper was discussed by Drs. Grant, Willmoth and others.

C. B. Spalding read a paper on "The Prostate," and showing some specimens. This was not only an entertaining, but instructive paper and was enjoyed by all. Discussed by Drs. Wathen and Grant.

S. B. Robinson made a motion that the society adjourn to meet on the second Wednesday of August at Sanders. Seconded by Dr. Brown.

ALLEN DONALDSON, Secretary.

Harrison—The Harrison County Medical Society held its regular monthly meeting at the Court House, May 1st, 1916.

Vice President, J. E. Wells, called the meeting to order. Members present: Drs. W. H. Carr, Lail, Grimes, N. W. Moore, Beckett, Havland, Carr, Wood, Best, Wells, Midden, Rees, W. B. Moore, Smizer, Martin, McDowell, Swinford.

N. W. Moore reported case of "Primary Malignant Disease of Liver."

W. H. Carr reported a case of "Rectal Polypus in Child Three Years of age," removal and recovery.

J. E. Wells reported a case of "Malignant Disease of Liver" primary trouble in kidney. Disease appearing in liver after kidney was removed four years previous to death of patient.

L. S. Givens read a paper on "Nasal Obstruction."

Dr. Best read a paper on "Relation of the Dentist to the Physician."

These papers were discussed by Drs. Martin, W. H. Carr, Wood, Beckett, Wells, Lail, Midden, Rees, N. W. Moore, Givens and Best.

Society the adjourned to meet June 5, 1916.

W. B. MOORE, Secretary.

Harrison—The Harrison County Medical Society met April 3, 1916, as the guest of Drs. Givens, Wells and Moore, in their new offices in the Reister building. Only two members of our society were absent.

G. S. Hanes and W. F. Blackford were among the visitors. Every one was delighted with Dr. Hanes' address on "Some Types of Diseases of Anal Canal and Rectum."

This was one of the very best meetings the society has ever held.

After the meeting adjourned the doctors enjoyed a most delightful lunch and social hour. We will be glad to have Drs. Hanes and Blackford visit us often.

W. B. MOORE, Secretary.

Lyon—The Lyon County Medical Society met on May 16, 1916 at Eddyville at 2: P. M. Members present were Drs. Linn, Purdy, Molloy, Kinsolving, D. J. and F. M. Travis.

In the absence of the President and Vice President, Dr. Purdy was made President pro tem, and the society was called to order.

Minutes of the last meeting were read and approved. Communications read and disposed of.

W. G. Kinsolving read a very interesting paper on "Some Errors in the Prevention and Treatment of Pneumonia and Pulmonary Tuberculosis," which was freely discussed and enjoyed by all present.

The society will have a barbecue at its next meeting, June 20th, 1916, at Kuttawa Mineral Springs, convening at 10:30 A. M., and extends an invitation to the Caldwell County Medical Society to meet with us on this occasion.

The society adjourned at 3:30 P. M.

F. M. TRAVIS, Secretary.

Muldraugh Hill—The Muldraugh Hill Medical Society called to order by President S. H. Ridgway at the City Hall, Elizabethtown, at 10:30 A. M., twenty-five members being present.

Reading of minutes passed.

Scientific Program.

C. L. Sherman, of Millwood, opened the program with a paper on "A Plea for Better Diagnosis."

Curran Pope, in opening the discussion, said he thought that the outlook for the general practitioner was best in making him a specialist in the so-called house disease. He should not be expected to be acquainted with the refinements of diagnosis in all branches. Thinks some diagnostic methods such as blood pressure readings are valueless because not thoroughly understood.

One systolic reading alone is valueless. One should know the diastolic pressure, the pressure pulse, and heart load.

Chemical analysis of stomach contents shows only functional activity of glands. Has limited value. Must determine if obstruction exists. Must interrogate every side. Would rely on clinical diagnosis rather than on laboratory findings if one or the other must be accepted.

R. C. McChord elaborated on above point made by Dr. Pope. Thought it unfortunate that the older, skilled physical diagnosis had fallen into disuse supplanted by the laboratory. Thinks the surgeon should be a skilled physical diagnostician. Should have a good idea of probable condition before operation. Specialists should be developed from general practitioners who have found in themselves an aptitude for a particular line.

T. E. Craig thought the country practitioner must stand or fall by physical diagnostic methods. Thought laboratory methods as practiced by the general man might be fallacious. Thought Brandt baths had no place in treatment of typhoid in country practice.

E. O. Grant spoke of importance of the discussion of this subject. Thought general practitioner should know not only treatment of acute febrile diseases but also the possibilities of chronic complaints. For example, a lump in a woman's breast may be incipient cancer. Stomach trouble, dyspepsia, an ulcer or cancer. One must recognize genito urinary infections early before upper tract is infected.

Chas. Farmer thought perfect clinical history was of first importance in making a diagnosis.

A. C. L. Percefull thought we are too prone to follow the lead of others. Thought the pendulum had swung too far in refinements of diagnostic methods.

R. T. Layman thought there existed considerable difference of opinion. There were some cases where the laboratory fell down badly. Other cases could not avail themselves of the refinements of diagnosis and had to be treated expectantly. Opinions as to the value of diagnostic methods vary greatly. The man who branches out along independent lines may be in danger in case a case went wrong, of a suit for malpractice.

C. Z. Aud asked help from the doctors to go down to Grayson and get the doctors down there interested in the society. He thanked Dr. Sherman for coming as a representative from Grayson county. As to the paper, thought diagnosis most important of all subjects. In order to do good work a man should limit the amount of his work. Give them good work and charge accordingly.

C. L. Sherman in closing said he did not mean but he merely showed some work a man might that one should rely on laboratory methods alone reasonably do. Thought personal laboratory

work highly gratifying and convincing. Thought one should make an adequate charge for special work.

A. C. L. Percefull, of Louisville, read a paper on "Hip Joint Disease."

J. W. Price opened the discussion of Dr. Percefull's paper. Agreed in method of handling these cases. Much depended on early diagnosis as to prevention of deformity. Get careful history, especially of fall. Watch for waddling gait. Have careful X-ray work done and have repeated plates made. Much depends on reading of plates. Wanted to ask the essayist how old these people lived. Don't many of these cases ultimately succumb to tubercle?

Curran Pope emphasized the dangerous methods of X-ray manufacturers in exploiting their machines. Must adopt various methods in different stages of bone disease. Great skill required in reading plates and in method of taking pictures.

Chas. Farmer thought Dr. Percefull's large experience at the children's hospital qualified him to speak with authority on this subject.

W. A. Bolling thought that not only in X-ray work but in skin reactions of tuberculin, etc., it was important to be able to interpret findings.

A. C. L. Percefull, in closing, spoke of the X-ray and its lack of evidence in early cases. Many of these cases succumb to tubercle. If they survive middle life not in danger later. Must treat both parent and child.

Meeting adjourned for dinner.

Reconvened at 1 P. M.

J. W. Price, Louisville read a paper on "Carcinoma of the Antrum of Highmore," with lantern slides.

W. A. Bolling, of Louisville, read a paper entitled "Bacterial Vaccines; Immunity and Opsonic Index" illustrated with lantern slides.

The two papers were read together but discussed separately. The discussion on Dr. Price's paper came first.

A. C. L. Percefull complimented Dr. Price on his presentation of the subject and congratulated the doctor on the operative recovery.

Chas. Farmer likewise congratulated Dr. Price on the handling of this case. Thought such cases extremely rare.

R. C. McChord complimented Dr. Price on the method he used in controlling his hemorrhage.

G. C. Hall called attention to the fact that this woman probably had a sinus suppuration for a long time previous to the development of the carcinoma and an operation when the trouble first began, removing all diseased bone as well as the polyps, might have prevented a malignant degeneration. He thought the operation itself a compliment to surgical ingenuity and showed how far surgery could go but he doubted the wisdom of advising an operation of this kind unless there was a reasonable prospect of a complete cure. He

didn't believe any of the men here present would themselves submit to the operation unless they could obtain some assurance of the permanency of the result.

J. W. Price, in closing, thinks we should operate if possible in the precancerous stage if we expect to be successful in the handling of cancer. We should remove the causes that result in cancer as in ulcers of lip, stomach, laceration of cervix. Thinks this woman had accessory sinus disease; the patient came late. Thought operation justifiable and said that patient was extremely grateful for the relief of pain and foul discharge. Paralysis of cheek cleared up partially. It was due to cutting of the 5th and 7th nerves.

A. C. L. Percefull opened the discussion on Dr. Bolling's paper. Thanked the doctor for his paper. Wanted to emphasize the fact that infections varied from day to day and that therefore autogenous vaccines were failures. Advocates use of mixed vaccines.

C. L. Sherman asked if increase in immunity was due to increased leucocytosis or to increase in power of individual white cells?

Curran Pope thought the subject was of importance to men of every class. Thought we should understand that the important thing was that we were injecting so much of a specific protein and not so many of killed bacteria. Thinks white cell does not kill bacteria but carries specific ferment which changes live bacteria into poison of lower resistance and finally red cell completes the destruction of the bacteria by hydrolyzation.

There should be no danger in the injection in itself. Had taken large doses of vaccine without any effect because that particular organism was not active in his system at that time. Liked stock vaccines in general, but thought them worthless in colon cases. By studying temperature closely we can follow rise and fall of opsonic index.

G. C. Hall said that in the acute infections of short duration where many organisms are present the stock vaccines seemed to work very well but in proportion as the case assumed a chronic type and one organism predominated the autogenous vaccines were superior. Thought the difference in the reactions obtained was sufficient to prove their superiority. Spoke of the recent work of Nagel and Haskin in treating chronic otorrhea by autogenous vaccines. These workers obtained results by careful cultivating and making an autogenous vaccine where all other previous methods had failed.

J. W. Price confirmed Dr. Hall's statement in regard to autogenous vaccines being successful in chronic cases where stock vaccines had failed. Reported cases from work carried on at the City Hospital.

W. A. Bolling thought that the idea of autogenous vaccines was ideal but that if as much

care was used in the selection of stock vaccine results would be better. Thinks predominating organism varies from time to time and is not at all constant. Thought time required for the preparation of an autogenous vaccine was a disadvantage. Thought that the use of stock vaccine controlled by microscopic examination of discharge would be a great help in the treatment. Watch for predominating organism and use vaccine accordingly. It is not necessary to control dosage with the opsonic index.

This completed the program for the day. The society regretted the absence of Drs. Lutz and Ravitch from the program and hopes that they will appear at a subsequent meeting.

A motion was carried appointing the Secretary a committee of one with power to act, to draw up a schedule of dates with the Secretaries of the other district medical societies so that the meetings of these societies will not conflict.

There being no further business the society adjourned to meet again in August.

GAYLORD C. HALL, Secretary.

THE FORUM

WARNING!

We are advised that a very clever swindle is being worked by a young man calling on physicians in various sections of the country. He is fraudulently soliciting orders and collecting money for subscriptions to medical journals and for medical books published by various firms. He usually represents himself as a student, working his way through college and trying to get a number of votes to help him win a certain contest. He sometimes uses the names of L. D. Grant, H. E. Peters, R. A. Douglas and F. C. Schneider and he usually gives a receipt bearing the heading of some Society or Association, such as United Students Aid Society; the Alumni Educational League; the American Association for Education, etc.

The description given of this swindler is— young man of the Jewish type, rather slender, with very dark hair combed straight back and shows his teeth plainly when talking.

The whole scheme is a fraud. The Societies mentioned do not exist. The idea is to collect money by offering special discounts and prices on medical books and journals and skip with the money.

This young man does not represent W. B. Saunders Company, whose name he frequently uses. He is a fraudulent subscription agent and physicians, generally, should be on the lookout for him.

NEWS ITEMS AND COMMENTS

A large company assembled Monday afternoon, May 16, in the recreation room of the Children's Free Hospital, Louisville, to do honor to the memory of a man who for twenty-three years served the afflicted children of the institution with all the devotion of a great man and a great mind.

A tablet recording the names of those who contributed to the Vance Memorial Fund, for the benefit of the Children's Free Hospital, was presented by Col. Andrew Cowan, who shortly after the death of Dr. Ap Morgan Vance, suggested the idea of such a memorial and was the first contributor.

Miss Mary Lafon, president of the hospital, presided. In a few brief introductory remarks, she paid a loving and tender tribute to Dr. Vance, declaring that his sweetness of disposition was demonstrated in his devotion to children. He loved to be in the Children's Hospital next to his own home, she said.

Dr. Lewis S. McMurtry gave an informal talk, speaking of Dr. Vance from the viewpoint of the profession.

It is peculiarly fitting, he said, that the people of the community should establish a living memorial within the scene of his work—the Children's Free Hospital, the most noble and beautiful charity ever established in Louisville. Because Dr. Vance was peculiarly and exceptionally fitted for the service he gave, no more appropriate place could be found in which to perpetuate his name and memory than in this hospital, said Dr. McMurtry. According to Dr. McMurtry, it was impossible to express adequately an appreciation of Dr. Vance's scientific skill. In comment on this point, he said:

"To master the scientific principles that underlie medicine and surgery, to acquire the judgment and skill to apply those principles efficiently, and then to do every day in the year a full day's work—that is of itself a colossal task. To discharge that commission with ability, with industry and fidelity is, indeed, a great life achievement. But Dr. Vance did more. His conception of his life work was that of human service, and to his professional attainments he added sympathy and a devotion to the suffering and unfortunate that was generous and broad and absolutely unselfish."

Dr. McMurtry said that in regard to Dr. Vance's life history, only a few comments were needed to note that he was a man of old Kentucky stock, fine physical system, capable of great labor and endurance, a man of wonderful self-effacement, and in all the relations of life, kind, helpful and generous.

In conclusion, he said:

"And now he rests from his labors. His name and his fame will be secure here in this hospital

long after we, like streaks of morning cloud, shall have faded into the infinite azure of the past."

Preceding Col. Cowan's address, Mr. Alex Bartlett stated that the amount of the subscriptions was \$7,557, and that all had been paid.

A peculiar touching little incident closed the exercises. Dr. Ben Carlos Frazier, who was closely associated with Dr. Vanece for many years, exhibited a little patient, the amputation of whose leg was the last piece of work done by the eminent surgeon.

Dr. Frazier has cared for the little patient ever since, and when he held little "Billie," the six-year-old boy, before the audience, his voice was broken with emotion as he said:

"Saving the life of this little child was the very last service of his life."

Dr. and Mrs. A. P. Dowden returned May 9, from Chicago where they spent two weeks. The doctor spent his time in the great hospitals of the city, getting latest ideas in surgery, diagnosis and medical treatment. In returning they stopped at Crawfordsville, Ind., and spent two days with Mr. R. E. Moss, pastor of the Christian church in that city. They say Mr. Moss has made a great hit. Over 400 have been added to the church since he went there, and he is very popular. Dr. and Mrs. Dowden noted the fact that the city was literally carpeted with dandelions, and when they remarked upon it they were assured by several persons that "the Campbellites and dandelions had almost taken Crawfordsville."

Dr. Geo. F. Doyle, who was employed by the Board of Education as Medical Inspector for the schools for Winchester, made his first report since his inspection of the Washington building to the Board. He mentions the sanitary and hygienic conditions of the school as generally unsatisfactory. He spoke of the overcrowded condition of the rooms, and offers practical suggestions for the improvement of conditions.

Dr. C. B. Price, of Harrodsburg, left May 8 for Los Angeles, California, where he will reside and practice his profession. His mother, Mrs. A. D. Price, and sister, Miss Evelyn Price will follow in a few weeks. The entire community regret to see these splendid people make their home elsewhere, as the family, for several generations, has been prominently identified with the activities of the town. Dr. Price is a skillful young surgeon, who has been doing splendid work in his profession here, and the wish for his continued success goes with him from his many friends.

Following a brief illness due to advanced age, Dr. Clayton McCarty, died suddenly at his home

in Henderson, May 9. The deceased had been indisposed for a few days but was able to be up since Sunday. He was up early Tuesday morning May 9th, and got shaved. About ten o'clock he complained of feeling worse and retired, remaining in bed until death claimed him.

The deceased was 76 years old last August, and was one of the best known physicians in this community. His sudden taking away has cast a gloom over the community and among his friends who have known and respected him all these years.

Besides one brother, Jones McCarty, who lives here, the deceased is survived by five grand-children, three living here and two in Louisville. The names of those living here are: Tom McCarty, Watson McCarty and Hayden McCarty.

Funeral services were conducted from the Baptist church of which he was a devoted member, by the Rev. W. W. Schwerdtfeger Wednesday afternoon May 10, at 3 o'clock, and interment followed in the family lot in Ridgwood cemetery.

Dr. John D. Maguire, city health officer of Lexington, left Tuesday, May 9, for Indianapolis, Ind., to attend the conference on housing held there May 10, which is being held in connection with the convention of the National Association of Charities and Corrections. Owing to pressure of business, Dr. W. O. Bullock, president of the Board of Health, who intended accompanying Dr. Maguire was compelled to defer the trip.

After a lingering illness of over three years, Dr. Joseph E. Johnson died at his home in Waverly, May 27, 1916. He was born and reared in this county but had been an eminent physician in the above town for over forty years. His brothers Henry and Al, who live on the old homestead in Blackford bottoms, left Friday to attend the funeral which took place at Waverly. He also has two brothers, Frank and John, in Maceo. His other brother, Richard, died in Morganfield about twelve years ago when he was also prominent as a doctor and an eminent citizen.

Dr. Dan Griffith, of Owensboro, was in Hawesville, May 27, to see Dr. Knox, who is suffering with an affected ear. Upon the suggestion of Dr. Griffith, Dr. Knox went to Owensboro Tuesday and was operated on in the city hospital and last reports are very encouraging as he is doing well. His many friends wish him a speedy recovery.

Miss Lila Mae Harper and Dr. Paul King McKenna, of Mt. Sterling, were quietly married at the Harper residence, Rev. J. S. Wilson officiating. Only a few relatives were present to witness the ceremony, after which the happy couple left for a few days' bridal trip to Cincinnati, and

upon their return will make their home at the Harper residence on Maysville street.

Dr. McKenna is one of our most prominent physicians with a wide circle of friends.

The first step in the campaign to eradicate tuberculosis and all other diseases in this county was taken yesterday when the Franklin County Health and Welfare League was organized with a charter membership of 100 persons. The meeting, to perfect an organization similar to those formed in other counties of the State, was held in the chapel of the First Baptist Church and was presided over by Miss Fannie Crittenden, chairman of the Emergency Committee of the Citizens' Improvement Association.

Following an appeal to the board of Citizens' Improvement Association and to the Emergency Committee of that organization to aid in the establishment of a Health and Welfare League in this county, similar to those which the State Tuberculosis Commission is establishing, over one hundred persons gathered at the church.

Dr. Fletcher Smith, aged 96 years, believed by many to have been the oldest practicing physician living, died at Dover May 20, 1916. Until a few weeks ago Dr. Smith was able to practice his profession, and on the evening before his death ate a hearty supper. He was born in Rochester, New York, in 1820.

Dr. David Barrow and Dr. J. A. Stucky, of Lexington, attended the Medical Congress in Washington. Dr. Stucky read a brilliant paper on "Mastoid Operation."

The program of the convention of the Kentucky State Association of Railway Surgeons which met in Louisville on Thursday and Friday, May 11 and 12, was announced by Dr. C. H. Vaught, secretary of the Association, at Louisville, Thursday.

Among the speakers were Dr. C. G. Daugherty, the well-known Paris physician and surgeon, who will read a paper at the meeting on "Treatment of Fracture of the Femur with Report of a Case of Unlimited Practice Treated by Means of Hodggen's Splint After the Method of Brown and Eve."

Dr. T. A. E. Evans, of Farmers, was elected president of the Kentucky Eclectic Medical Association at the concluding session of the twenty-eighth annual convention of the organization, held at the Seelbach Hotel yesterday.

Other officers elected are Dr. G. L. Everley, of Rockport, Ky., vice president; and Dr. J. C. Mitchell, of Louisville, secretary and treasurer. Dr. Mitchell also was elected a delegate to the convention of the National Eclectic Medical As-

sociation, to be held in Cedar Point, Ohio, June 20-23. Louisville was chosen as the next meeting place of the State Association.

A number of papers, many of which were of only technical interest, were read at yesterday's session. Dr. J. C. Mitchell, in a clinical demonstration, described the satisfactory results he had obtained by the use of salicylic acid and guaiacol in the treatment of tuberculosis.

Other papers heard included: "Things Worth While," Dr. J. A. Farabagh, Clinton; "Trachoma," Dr. J. L. Richardson, Ashland; "Grindelia Robusta," Dr. T. A. E. Evans, Farmers; "Gunshot Wounds," Dr. J. P. Huff, Plummers Landing; "Maerotys," Dr. J. H. Hhultz, Jeffersonville; and "Liver Troubles," Dr. J. T. Acton, Eubank.

The eclectic convention began Wednesday. About sixty physicians attended.

The thirty-first annual session of the Kentucky State Homeopathic Medical Society convened in Louisville, May 4. Dr. E. B. Smith, of Shelbyville, president of the society, called the meeting to order, and after hearing the reports of officers and committees the sessions were placed in charge of the following heads of bureaus for the discussion of various medical problems and experiences:

Bureau of Homeopathics—Dr. J. A. Baute, chairman; papers by Dr. Lee Norman, Dr. L. I. Farmer.

Bureau of Materia Medica and Clinical Medicine—Dr. T. H. Hollingshead, Louisville, chairman; papers by Dr. A. E. Hinsdale, Dr. M. Mills, Dr. T. H. Hudson, Dr. F. C. Askenstedt, Dr. J. J. Wynn, Dr. Lillian Askenstedt, Dr. T. H. Hollingshead, Dr. A. H. Siebert, Dr. Charles N. Cooper.

Bureau of Surgery—Dr. Charles Pollard, of Princeton, chairman; papers by Dr. H. H. Wiggers, Dr. James A. Davis, Dr. George S. Coon, Dr. C. A. Fish.

Bureau of Obstetrics and Gynecology—Dr. O. V. Miller, Vine Grove, chairman; papers by Dr. H. P. Fischback, Dr. M. E. Hopkins, Dr. J. T. Bryan, Dr. O. F. Miller, Dr. C. C. Meade.

Bureau of Pediatrics and Sanitary Science—Dr. J. E. Million, Lexington, chairman; papers by Dr. J. P. Cobb, Dr. J. T. Bryan, Dr. J. E. Million.

Dr. Claude A. Burrett, dean of the medical college of the Ohio State University, gave an illustrated lecture on "Homeopathy in the Ohio State University."

About seventy-five doctors were in attendance at the forty-sixth annual meeting of the Southwestern Kentucky Medical Association, which convened at Paducah, May 9-10. A number of excellent addresses were delivered. Following the

election of officers to-night a banquet was held at the Palmer House.

The officers for the ensuing year are: President, Dr. E. B. Willingham, of Paducah; First Vice President, Dr. J. F. Kirksey, of Sedalia; Second Vice President, Dr. O. R. Kidd, of Paducah; Secretary, Dr. E. W. Jackson, of Paducah; Treasurer, Dr. H. G. Reynolds, of Paducah, re-elected.

The semi-annual meeting will be held the second Tuesday in October at Clinton.

A most interesting meeting of the Christian County Medical Society was held May 15, with a number of physicians from Todd and Trigg county as guests.

At 10 o'clock the physicians gathered at the Rex theater, which had kindly been tendered free of charge by Manager Stockley, and where they were treated to highly interesting and informative illustrated lectures by Dr. Welborn of Evansville, and Dr. Haggard, of Nashville. The lectures were illustrated with stereopticon slides.

Dr. Welborn's lecture treated of various diseases of the bones and was illustrated with X-ray views. Dr. Haggard's lecture treated more especially of abnormalities and the surgical treatment for same, and he showed several views of the cases presented.

At noon the physicians were served dinner at the Jennie Stuart Memorial hospital the invitation having been extended by Mrs. Wanda Williams, the superintendent of the institution. The meal was beautiful and most appetizing. This afternoon a literary program is being given in the assembly room at the hospital.

Officers for the ensuing year were elected in the afternoon and this was an exceptionally important election as the officers named will serve during the meeting of the State Medical Association in September.

The regular monthly meeting of the Bourbon County Medical Society was held in the County Court room in the Bourbon County court house, May 19.

Preceding the regular program the members of the society were guests of the Ardery Drug Company at an elaborate six-o'clock dinner at the Hotel Windsor, where the feast of reason and flow of soul was further amplified by an abundance of good things well calculated to refresh the inner man.

The meeting was opened in the court house at eight o'clock with a business session, after which Dr. Granville S. Hanes, of Louisville, who was an honored guest of the local society, delivered an illustrated lecture on "Methods of Rectal Examination and Treatment." Dr. Hanes was to have delivered this lecture at the December meeting, but could not be present, and this part of the program was postponed until the May meet-

ing. Dr. Hanes used a kinetoscope in giving demonstrations of his subject.

The meeting was a most interesting one from every point of view. Several physicians from surrounding towns were present as guests of the society.

The Graves County Medical Society in session May 25th heard lectures on the treatment and prevention of tuberculosis by Dr. J. W. Warner, of St. Louis, and Col. L. M. Maus, secretary of the State Tuberculosis Commission. Col. Maus held a meeting this afternoon with the Civic League of the Woman's Club and organized a community health and welfare league and discussed the organization of a tuberculosis sanitarium for the First congressional district. A banquet was given at Hatel Hall with Dr. John L. Dismukes, president of the society, presiding.

The Mercer County Medical Society met May 12 at their room at the Hospital and held a very interesting session. The meeting was more largely attended than usual, the following physicians being present: Dr. J. B. Robards, Dr. M. L. Forsythe, Dr. W. D. Powell, Dr. W. H. Witherpoon, Dr. C. B. VanArsdall, Dr. Bishop Wash, Dr. Haston, Dr. C. W. Sweeney and Dr. Kelley. Dr. Sweeney read a fine and instructive paper on "Ileocolitis."

Following was the program of the Eagle Valley Medical Society held at Sanders, May 10, 1916: Meeting called to order at 10 A. M. Reading of minutes and transaction of business.

Reception of new members.

Appointment of committees.

Paper—Diagnosis of Kidney Lesions.....

Dr. A. P. Cole, Cincinnati, O.

Paper—Normal Salt Solution and Its Dangers

Dr. David Willmoth, Louisville

Afternoon Session.

Paper—Saero-Iliac Disease and Its Treatment by a New Method.....

Dr. Curran Pope, Louisville

Paper—The Prostate

Dr. C. B. Spalding, Louisville

Paper—Syphilis of the Heart and Vascular

System..... Dr. Rowan Morrison, Louisville

The Bell County Medical Society met May 12, in Pineville. The doctors and their wives were invited by Dr. O. P. Nuckols to meet with him as his guests at the Pineville Hotel, from 2 to 4 o'clock. Refreshments, music and good cheer.

Dr. G. E. Hatcher, of Cerulean, and Dr. J. W. Crenshaw, of Cadiz, were the two Trigg county doctors in attendance at the joint meeting of the doctors of Christian, Todd and Trigg counties in Hopkinsville. The societies were

the guest of the Jennie Stewart Memorial Hospital, where the afternoon session was held. In the forenoon the exercises consisted of a lantern-slide entertainment at a local theater. Dr. Welborn, of Evansville, presented an X-ray outline of interest, and Dr. Haggard some curiosities in surgery and photographs.

IN MEMORIAM

CHARLES E. SCHOLLES.

Dr. Charles E. Scholes was born in Humphreys County, Tennessee, August 20th, 1858. He graduated from the University of Tennessee in 1892. Dr. Paul F. Eve, 2nd, was his preceptor. He first located near Tennessee Ridge, Humphreys County, Tennessee, where he remained until 1904, when he removed to Lynn Grove, Calloway County, Kentucky, where he continued to practice medicine until his death, January 27th, 1916. Our brother demonstrated his progressiveness and fraternal spirit by his affiliation with his county medical society and the State Medical Association, which he joined at our annual meeting, May 14-15, 1907.

Dr. Scholes was well endowed mentally, was a good student and a capable practitioner of our art. December 9th, 1897, he united with the Cumberland Presbyterian church, and served in the highest position to which a layman is eligible, that of an Elder. Dr. Scholes enjoyed a large practice, was a good citizen and an exemplary husband and father. He was a modest, unassuming man, but his intrinsic worth was appreciated by a large circle of clients and friends by and upon whom his memory is revered and indelibly impressed. A friend writes of him, "He has gone from us, but the fragrance of his beautiful life, like the sweetness of the lovely flowers, abides." We know that he is now "in a land where suffering is no more and where God reigns supreme." This beautiful tribute coming from the pen of a layman, is all the more appreciated. It demonstrates that people of intelligence are giving our noble calling the consideration which by reason of the self denial, sacrifice, exacting natures of its duties, its hard physical and mental labor, it is so justly entitled. In the life of our Saviour, second to his teaching, was his healing of the afflicted. This work demonstrated his intense love for mankind and impressed His divinity. Our profession bears his impress. He went about doing good. We regret that our acquaintance with Dr. Scholes was limited, but we knew him to be an intelligent, refined, courtly gentleman.

ROBERT T. HOCKER,
W. G. KINSOLVING,
V. A. STILLEY,
Committee.

JOHN GAUNT BROOKS.

At the annual meeting in May, 1882, Dr. John Gaunt Brooks, of Paducah, was elected President. He was a charter member of the second organization, that of April 25th, 1871, one of the noble trio to whom we are indebted for its existence, beginning at the above named date. Doubtless the organization would have ultimately materialized in time, but for their enthusiasm and Herculean efforts nothing might have been accomplished for a number of years. Dr. Brooks was then, as he continued to be until the close of his earthly career, a leader in medical society and organization work. He was born in Montgomery county, Tennessee, October 5, 1840. The family moved to Lovelaceville, Ballard county, Kentucky, in 1851. In the autumn of 1859 his father purchased a farm in the same county near Woodville. Lovelaceville was in the fifties a fine school town, and our subject had the advantage of its High Schools for a number of years after he had finished in the public schools. When the Civil War began he enlisted as a private soldier in the Confederate Army Company D, Third Kentucky Infantry, commanded by Col. Lloyd Tighlman. He served his company as orderly sergeant for the last three years of the war, a very responsible position requiring for the efficient performance of its duties an educated man. While his official position was not one of high rank, his splendid equipment, fine natural endowment, energy rarely equalled, rapidity of thought and action, blended with physical courage, who that knew him can doubt him fitted to have worn with honor a Colonel's Eagle or a General's Star.

Early in 1863 his regiment was mounted and formed a part of General N. B. Forest's Corps. He participated in the battles of Shiloh, Baker's Creek, Harrisburg, Vicksburg, Jackson, and a number of others, serving with General Forest in all of his campaigns. At the close of the conflict he returned home, his spirit undaunted by four years' of danger and privation, overcome, had made him a good and courageous soldier he but not conquered.

With the same energy and determination he immediately went to work on his father's farm with a view to accumulating sufficient means to enable him to make a capable doctor. During the autumn and winter of 1865-66 he was a student in Eureka College, Eureka, Illinois. In June, 1866, he began the study of medicine with Dr. Joseph W. Thompson, of Paducah, Kentucky. He attended lectures at the University of Nashville, in 1866-67. About March 15th, 1867 he went to Philadelphia and took a summer course of instruction in the Jefferson Medical College, and also took the ensuing winter course and graduated from this school in March, 1868. How well

*Read before the Southwestern Kentucky Medical Association.

he succeeded in making a good doctor his appreciative clientele gladly testify. Very few men were ever more devotedly loved by their patrons, and his professional brethren unanimously endorse him as one of the ablest surgeons and general practitioners in the State.

Dr. Brooks first located at Lovelaceville, Ballard county, and formed a partnership with Dr. David P. Juett, which continued for only a few months. January 1st, 1869, he removed to Paducah and began at once the practice of his profession and lived to see the city grow from 7,500 to 27,000 population with business houses and residences extending over several square miles.

In the winter of 1870-71 Dr. Brooks took charge of an epidemic of smallpox and while engaged in this philanthropic work he was elected city physician in which capacity he served four years. Our brother enjoyed a large practice, unequalled by but few doctors who ever resided in Paducah.

To Drs. Joseph W. Thompson, James W. Singleton and John G. Brooks we are almost totally indebted for the organization of this Association. For a number of years prior to 1882 Dr. Brooks' colleagues in this body besought him to permit them to confer upon him its highest honor. His activity in working up an interest resulting in its organization and being one of its most efficient members clearly entitling him to it, but he threw his influence to others and reluctantly accepted the position when his colleagues refused to delay longer what they considered an act of justice. The theme of his retiring address was "The Physician Himself," and we can pay it no compliment than to say it was a paper worthy of the man. In his clear and forcible style he urged his colleagues to be zealous students. He strongly emphasized the necessity in order to be first class physicians and "put money in thy purse," for proper equipment and other purposes. In the summer of 1872 he went to the Hawaiian Islands. In his far western home his superior talents were soon recognized. He was appointed Physician to Kink Kanakaua and also had charge of the Leper Colony. In 1874 he returned to Paducah which he devotedly loved. In 1887 he was elected President of the State Medical Society. He continued in active practice until June, 1912, when, overtaken by the inevitable infirmities of age and a sufferer from disease he was compelled to retire. What this meant to one of his superior qualifications, industry, unselfish disposition and overmastering desire to serve and be a blessing to humanity, we have but a faint conception. A favorite expression of his gives us an idea of his feelings: "Action is life, non-action is death." Dr. Brooks never ceased to be a close student of medicine. This Association was his first love, and always his favorite. His contributions to the programs of instructive papers read and his

participation in discussions were always among the brightest and best.

While serving as City Physician in 1871 he succeeded in getting the City Council to erect a Hospital. He was also the leading spirit in the movement that brought about the erection of Riverside Hospital, which opened for the reception of patients in 1905.

While a very busy doctor, our brother performed a prominent part of the duties of a citizen in an official capacity. He served four years as a member of the City Council and a like period on the public school board. About 1876, mainly through his efforts the Paducah Medical and Surgical Club was organized. He served it as President for one year. He held membership in the McCracken County Medical Society, the Kentucky Medical Association, and the American Medical Association, the Mississippi Valley Medical Association and the International Congress, and was also a member of the American Anti-Tuberculosis League. From early in 1872 he was a member of Paducah Lodge No. 127 F. & A. M., About December, 1871, he united with the Protestant Episcopal Church. Previous to his marriage he joined the Christian Church, the church of the lady who later became his wife. May the 20th, 1875 he was married to Miss Marye King daughter of ex-Governor John Q. A. King an eminent lawyer and statesman. Five children blessed their union: King Brooks, D. D. S., Chicago; James Brooks, Real Estate Agent, Chicago; Overton Brooks, M. D., Chicago, and John Brooks, Banker, and Mrs. Ethel Brooks Koker, both of Paducah. While as a physician and a citizen Dr. Brooks was a grand character, it was as a husband and father he appeared at his best. In the sanctity of the home, as in private life, his deportment was grand, laboring here as elsewhere, first for the comfort of others. The wishes of his intellectual, refined Christian wife reigned supreme with him.

He attended our annual meeting of May 11-12, 1915, and while physically not his former self his fine mental powers retained their wonted brilliancy. We then hoped that he would be with us a few more years, but this pleasure was denied us. His demise occurred September 25th, 1915. He was the last survivor of our charter members. In the death of Dr. Brooks, without an exception, we all felt it as a personal bereavement, as there was not one among us who did not love him. No other member ever occupied a place nearer our hearts. His passing removes the last link in the chain connecting us directly with our beginning. A monument marks the place where he sleeps in beautiful Oak Grove, by the companion of his young manhood and his old age, but he still lives in his grand work as a physician and surgeon, by his effecting the organization of the Paducah Medical and Surgical Club, his work in the or-

ganization of this association, his presidency of and work in our State Medical Association, his membership and his work in the other societies already enumerated, and by his influence in the founding of the City Hospital. In 1883 he founded a private sanatorium which he maintained and continued for ten or twelve years with success, but the work was so heavy he reluctantly discontinued it. His work as a city and school official, a model husband and father are his greatest monument.

Unlike some successful men, he was modest while firm in his convictions, but was never dogmatic. In all of the relations of life he was a courteous, splendid, chivalrous gentleman. His life is an inspiration to us, his surviving associates, to reach the highest degree in point of qualification and service. Our Association has during the forty-five years of its existence had many bright names upon its roll, many of whom were known personally or by reputation throughout our State. Some have won a national reputation. In point of ability, enthusiasm, zeal and sincerity he was excelled by none. Always he did his best. Can mortal do more? The writer feels deeply and keenly the general sorrow at the closing of his grand life, to him, if you will pardon a personal reference, it means the severing of a tie of unswerving friendship of forty-nine years. To us there is in our grief the knowledge that his life was so perfect, so beautifully rounded out. November 29th, 1914, the sorest bereavement that ever occurs to a man cast its dark shadow on the life of Dr. Brooks, in the death of his wife. Life could never be the same, but brave, strong man, that he was, he met it in the same spirit that he met all other trials. While his mental faculties were unimpaired, life had lost the most of its zest and sweetness. Unbiased by friendship we have not attempted a word of fulsome eulogy, but justice, sheer justice to the life and memory of a truly great and good man.

ROBERT T. HOCKER,
W. G. KINSOLVING,
V. A. STILLEY,
Committee.

JOSEPH E. JOHNSON.

After two and one-half years of distressing sickness, the last ten months of which he was compelled to keep his bed, Dr. Joseph E. Johnson, of Waverly, Ky., departed this life May 25th, 1916, at 8 o'clock P. M., surrounded by his family and friends. The funeral services were held in St. Peter's Church at Waverly, May 27th, and were conducted by Rev. Father O'Neill, after which the remains were carried to St. Vincent Cemetery for interment, the ceremony at the grave being conducted by the Rev. Father Cunningham. The pall-bearers were of his professional brethren, Drs. Conway, Graves, Allen and

Rhea, of Morganfield; Dr. Griggs, of Hitesville and Dr. Neary of Waverly. The funeral services, both at the church and grave were wonderfully sweet and solemn; the floral offerings were many, appropriate and beautiful. But above and beyond all was the loving tribute paid him by his innumerable friends of both sexes, and of all ages and conditions, who, with kind words and loving hands, sorrowing hearts and tear-dimmed eyes laid him in his narrow home to await the last great day. Dr. Johnson was born in Daviess County, Ky., June 28th, 1846. He attended the common schools of his county, afterwards going to St. Mary's College, and completed his education at Notre Dame University of Indiana. He received his M. D. degree from the Medical Department of the University of Louisville; a few years later taking the same degree from Bellevue Medical College of New York; and later still did special work at the University of New York. He began his medical life and ended it in Union county. First locating at Uniontown, later at Morganfield, and finally at Waverly, where the far greater part of his useful life was spent. Dr. Johnson was twice married, first to Miss Allie Hancock in 1875; to this union no children were born. He was married to his last wife, Miss Katharine Hite, who survives him, and to this union eight boys and one girl were born, all of whom survive him. These are John L. Johnson, W. R. Johnson, Waverly; W. E. Johnson, D. D. S., Paducah; J. E. Johnson, D. D. S., Louisville; G. F. Johnson, A. B. M. D., Waverly; R. S., T. R., H., and Dorothy Johnson, Waverly. As a husband and father he was tender and loving, and kind, and true; always, in his mind and heart, his family occupied the first place. Under his careful training, wise regulation and loving advice the boys have grown to upright, noble, useful men and citizens; and the daughter to beautiful, lovable womanhood. This bereaved wife, these noble boys, this sweet daughter mourn not alone in their sorrow; they have the heartfelt sympathy of every one who knew and loved their honored and distinguished father. As a citizen Dr. Johnson stood immovably for those great fundamental truths and principles which tend to good citizenship; not only teaching them, but exemplifying them in his own life, thereby becoming a living example to the rising generation. If greatness consists in goodness he was a great man. In his chosen profession he was at his best; he was devoted to medicine and loved it wholeheartedly; never ceasing to be, in his long career, a hard student. A close and keen observer, the slightest deviation from physiology at once attracted his attention, and this faculty rendered him one of the most brilliant diagnosticians of our State. Notwithstanding his diagnostic ability he was unable to diagnose the pathology underlying his condition; and in hopes of having

it cleared the best talent of St. Louis, Louisville and other places, were called in consultation; but where he had been unable to lift the veil these also failed, and he passed away without any clear diagnosis of his case having been made. He loved the profession not for any pecuniary advantages it might bring him, but for the opportunities it offered of doing good to humanity. The weather was never too bad, the night too dark, the sun too hot to deter him from answering to the call of distress and pain. This not only to the rich and those able to pay for his services, but to the poor and unfortunate also; for every human being, regardless of color or condition, when in sickness and distress was his brother, and had the first call upon his sympathy and science. His place in the hearts and confidence of his people will long remain unfilled; and his medical brethren of Union county will seriously miss his diagnostic ability and wise counsel. Personally, he was my friend, what more can be said?

R. H. RHEA.

BOOK REVIEWS

Gynecology—By William P. Graves, M. D., F. A. C. S., Professor of Gynecology at Harvard Medical School. Octavo volume of 770 pages with 424 original illustrations, 66 of them in colors. Philadelphia and London: W. B. Saunders Company, 1916. Cloth \$7.00 net; Half Morocco \$8.50 net.

Dr. Graves has presented an entirely new work; new in the sense of being original in conception as well as in execution. In the first place he has, in this handsome volume, exceedingly well covered the entire range of gynecology. Part I deals with gynecologic physiology, an understanding of which is so necessary to the student and for the interpretation of remote symptoms.

Part II discusses gynecologic diseases, and Part III covers, as thoroughly as need be, the subject of operative gynecology. One of the most striking things about the work is the fact that most of the illustrations, and they are many, are by Dr. Graves' own skillful hand. It is a pleasure to note that he has abandoned the indistinct and, because of the lack of detail, unmeaning photograph and micro-photograph, and has given us instead, throughout the entire work, most excellent pen, wash, and color drawings, whose clearness of detail enrich the text and greatly repay the added labor and cost of producing.

Pellagra.—By George M. Niles, M. D., Gastro-enterologist to the Georgia Baptist Hospital, Wesley Memorial Hospital and Atlanta Hospital Atlanta, Georgia. Octavo of 261 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$3.00 net.

In this second edition of Dr. Niles widely read

work the author has preserved his fair and unbiased attitude toward all who are striving to unravel the mystery of the etiology of this perplexing disease. While evidently led through his own experiences and investigations to give credence to the disputed theory of spoiled maize or carbohydrates as the causative factor, he nevertheless gives ample space to those whose observations lead them to other conclusions.

The treatment of pellagra has not been settled upon a definite rational basis, nor will be until the specific cause is known, but the chapter with this heading presents every line of treatment that has given results benefitting the patient and there is a diversity of therapeutic measures to choose from.

Cancer of the Stomach.—A Clinical Study of 921 Operatively and Pathologically Demonstrated Cases, by Frank Smithies, M. D., Gastro-enterologist to Augustant Hospital, Chicago. With a Chapter on the Surgical Treatment of Gastric Cancer, by Albert J. Oschner, M. D., Professor of Clinical Surgery in the University of Illinois. Octavo of 522 pages with 106 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$5.50 net; Half Morocco, \$7.00 net.

In a volume of this size, devoted to a specific disease of one organ, as indicated by the title, one may naturally expect to find an exhaustive study of the entire subject. The greater part of this book is very properly devoted to the recognition of symptoms and means of diagnosis. Herein lies its greatest value to the general physician as well as to the surgeon. No recognized diagnostic procedure is ignored yet the author has the courage to caution that "Rash surgery is to be condemned, but a sharp scalpel is often a more satisfactory differential diagnostician than is the keenest mind, medically"; and again, in the chapter on non-surgical treatment, "When made by trained surgeons, abdominal section is attended by a mortality of 1-2 of 1 per cent. There is a mortality of 100 per cent. in the non-surgical treatment, but indicates lines of treatment that must be applied to any case of the disease whether operative measures are attempted or withheld.

Do You Know That

To-day is always the best day to clean up?
Fresh air, food, rest—these three combat tuberculosis?

The State and County Boards of Health have reduced typhoid fever to 80 per cent. in some communities.

Overeating, constipation, lack of exercise, foul air and eye strain, often produce headache?

Polluted drinking water causes much sickness and many deaths?

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EDITORIAL.

THE HOPKINSVILLE MEETING.

Plans are progressing most satisfactorily for the next annual meeting of the State Association, at Hopkinsville. The Christian County Medical Society has fixed upon 2 P. M., Tuesday, October 17th, as the time for the meeting of the House of Delegates, to be followed by the scientific sessions of the Association in the forenoon, afternoons and evenings of the 18th, 19th and 20th. All of the sessions will be held in the Auditorium of the commodious and conveniently located Christian Church, and the registration officers and scientific exhibits will be located in the basement of the same building.

The medical profession of Hopkinsville and Christian county are taking an active interest in all the plans, with the expressed purpose of making the meeting one of the most successful in the history of the Association. The hospitable homes of the citizens are to be thrown open to all the overflow of visitors from the excellent hotels. A splendid program is being worked out. Application has already been made for reduced rates on all the railroads, and it is hoped that members from every section of Kentucky will reward these efforts for their entertainment by preparations, begun now, to attend the meeting and visit this beautiful and prosperous city and county.

COUNTRY MEMBERS FALLING DOWN.

It is a matter of sincere regret to the Program Committee and Council that such a small number of the members from the small cities and towns and the country districts have responded to the repeated requests which have been sent them for papers for the Hopkinsville meeting. Enough of the old reliables from the large cities have made applications to fill the program but it has always been the policy of the management to have

every element of the profession receive its full share of the advantages and honors of the annual meetings, but this can only be done for this meeting through the cordial cooperation of the rank and file of the profession, manifested by prompt action instead of talk, as is some times heard, of the city brethren getting more prominence than they deserve.

Ten more short, crisp papers are needed before the program goes to the printer. Write at once to Dr. J. G. Gaither, Hopkinsville, Chairman of the Program Committee.

ANNOYING LABORATORY EXPERIENCES.

The directors of the laboratories of the State Board of Health are often surprised over things sent to them for examination, and more frequently at the carelessness shown by intelligent physicians and people in the preparation, packing and shipment of specimens, otherwise entirely proper and legitimate. For instance, within the last few days a large handsome, unmuzzled Collie dog came by express to the Bacteriological Laboratory, without the name of the sender or a word of information as to the charges against him, or instructions as to what should be done with him. Thirty-six hours later, a letter was received from a prominent public official, the owner, stating that the dog had bitten one or more persons, was suspected of being rabid, and asking that he be placed under observation until it could be determined if his victims needed the Pasteur treatment. The dog came from a distant part of the State, the trip requiring changes of trains and roads, with no warning on the crate that there was anything suspicious as to either his health or character, in the course of which a number of people necessarily handled him and incurred the danger of possible exposure to rabies. Suspected dogs, horses and cows have been sent in before, but all of these were muzzled and in the care of custodians, who

could care for the poor animals and prevent danger to others. As all the workers in this Laboratory are women, and have no menagerie for the care of animals, no cemetery for the disposal of their remains or funds for the maintenance of such activities if they had them, the dilemma of these young scientists, accustomed to face and avoid recognized laboratory dangers constantly with calm courage, over the reception of this live, anonymous but suspected dog, may be easily imagined. Often the express man turns up, carrying at the end of a long pole an old bucket, basket or other receptacle, containing the decayed remainder of what was a dog head two or three days ago, shipped without the precaution of packing in ice, with brain, Negri bodies, if really from a rabid animal, bones and flesh, only a malodorous, nauseating maggot-ridden mass, which might just as well have been left on the animal so far as any good could come from its examination.

But these are only a few samples of their troubles, caused by the carelessness or thoughtlessness of physicians who know better, and yet constantly send in specimens in such a way as to destroy any chance of getting satisfactory results from the laboratories by the way they procure, prepare or ship them. Almost every day specimens of diluted feces arrive in tuberculosis containers, dirty sputum in containers intended for hookworm, or diphtheria specimens in either of the ones mentioned, or in an imperfectly cleaned morphine or quinine bottle; and, probably, worst of all, a day seldom passes without a package coming in with no name or address on it. Dr. Curry has similar experiences in the Water Laboratory. From one town, to which he had sent carefully packed and sterilized containers, with full printed instructions, as is done for all who ask them, he received specimens day after day in poorly cleaned cocoa-cola bottles. One cannot but feel sorry for the patient or community dependent upon such doctors in their days of stress; good fellows, no doubt, and meaning well, but none the less a constant source of danger to those who must rely upon them; and it is from this careless or ignorant element in the profession that most of the criticism about laboratories and all similar public activities comes.

DR. STUART EXONORATED.

At a recent term of the Daviess Circuit Court, with the approval of the State Board of Pharmacy, the Commonwealth's Attorney, Mr. C. E. Smith, in open court, moved that proceedings pending against Dr. J. M. Stuart

for violation of the Harrison Narcotic Law be dismissed, and it was ordered. It was stated to the court that the proceedings originated from an awkward mistake and should never have been started. At the succeeding meeting of the Daviess County Medical Society a resolution of confidence in Dr. Stuart was unanimously passed and sincere regret was expressed that he should have been subjected to this unmerited annoyance.

A MANUAL FOR HEALTH OFFICERS.*

This volume of 65 pages is easily the most complete, comprehensive and practical treatise on public health and health administration which has appeared in this country. Assuming that the more abstract principles of sanitary science are already in the possession of the health officer, the author places constant emphasis upon the practical administrative duties likely to confront the trained official who has been selected and charged with the responsibility of protecting the health and lives of the people by a vigilance, which extends to every day and night in the year. In so far as possible, definite instructions and procedures are given needful to meet all conditions and emergencies likely to occur, but in regard to the many matters about which present knowledge is not sufficient for such positive deductions, the effort of the author has been to clearly indicate the chief points which may come up for consideration.

First, importance is given, as should be done in such a treatise, to the organization and functions of local health authorities, and then those maintained by the state and National governments, and the relation of these to the local health boards are carefully treated. The chapters on the prevention and management of the communicable diseases follow, with much needed, detailed information as to the origin, transmission, control, period of isolation and public health treatment of all such diseases from the community standpoint, full attention being given to child hygiene.

Protection of the milk and other food, and of water supplies is handled in the detailed and practical way likely to be most helpful in meeting the daily problems as they arise, as is true of the chapters on nuisances, publicity, legislation, vital statistics and all other factors affecting well-being, health and life.

In the foreword, Professor W. T. Sedgwick.

*By J. S. McNutt, A. B., S. B., formerly Health Officer of Orange, New Jersey; a member of the Board of Examiners of Health Officers and Sanitary Inspectors of New Jersey; Lecturer on Public Health Service in the Massachusetts Institute of Technology. Published by John Wiley & Sons, 453 Fourth Avenue, New York City. Price \$3.00

of the Massachusetts Institute of Technology, one of the best of authorities in this country on health affairs, sets forth both the need and timeliness of this book in the following words: "At the end of the nineteenth century the public health officer when he existed at all was generally merely a physician who had assumed the title and who gave to the office only a small part of his time. Of any special training for public health work he was blissfully innocent. Of water supply, sewerage, milk supply, insects, infant mortality, school hygiene statistics, ventilation and similar topics so indispensable to-day he had little or no knowledge. His interest began—and too often ended—at the bedside and the hospital. But with recent remarkable development of sanitation, preventive medicine and hygiene; with the recognition of the significance of pure milk, pure water, pure air and pure food; with the modern emphasis upon the transmission of disease by insects and by carriers; and with the growth of sanitary law and Federal, state and municipal regulations, the problems and practices of health authorities, whether physicians or laymen, have become so highly technical as to require special preparation and technical knowledge. Hence it is not too much to say that within the last decade a new profession has arisen in America, namely, that of the trained and full-time health officer."

"For health officers, boards of health, and all other health officials Mr. MacNutt's Manual will be of immediate practical value. To the beginner it will be especially helpful since it virtually records the practical results of the author's personal experience in the profession. For students in training, such as members of schools for health officers, and for students pursuing special courses in public health science in medical, scientific and technological schools it should serve also as an indispensable guide to those subjects requiring most careful consideration."

As it is confidently expected that the "All-Time Health measure" will become a law at the next session of the General Assembly, and that when it does, many important and desirable positions will be created demanding just the detailed and comprehensive information contained in this invaluable volume, it is cordially commended not only to all members of the profession who cherish aspirations for health work, but to physicians, teachers, club women and others who are taking such an active and intelligent interest in the protection of health and life.

INFANTILE PARALYSIS.

The reoccurrence of this epidemic in New York and its rapid spread to distant states, excites much interest, and makes us wonder if our own State or community may not be another spot where this disease shall again lay its withering hand. Without warning, invisible, uncontrollable, with present knowledge, it travels by secret ways at unexpected times and silently enfold its helpless victims in its embrace leaving them dead, crippled for life, or leaving them none the worse for the attack, according to its own capricious course.

It travels under various names but its presence always means disaster. The United States Census Bureau, following the International Classification of Diseases and Causes of Deaths, compiles under the head of "Epidemic Acute Anterior Poliomyelitis," the deaths from "Infantile Paralysis," "Acute Poliomyelitis," "Infantile Spinal Paralysis," "Acute Infantile Paralysis," "Infantile Paresis," "Acute Myelitis," "Spinal Paralysis," "Infectious Paralysis," "Infantile Cerebral Paralysis." The reason for these various names for this disease is partly explained by its pathology which, unfortunately, was, until lately, widely misunderstood.

The average doctor was taught that the disease was a result of the affection of the motor cells in the anterior horn of the spinal cord, and naturally came to look upon the disease as one showing the paralysis or other disturbances depending upon this lesion. As a matter of fact the infection may attack and produce lesions in any part of the brain, meninges, cord, or large ganglia and its symptomatology is as varied as in any lesion affecting the central nervous system or any part of it. Wickman, in fact, has presented the classical divisions of its types, which are accepted, and while, as a matter of course, one type naturally would merge more or less into another, they are fairly distinct.

"I. The spinal poliomyelitic type, characterized at the onset with fever, gastro-intestinal disturbances, or angina, headache, pain, often rigidity of the neck and spine, and pains in the extremities, of varying intensity and distribution. From one to six days after the onset of the febrile symptoms there develops a paralysis which has certain distinctive characteristics, viz., it is a flaccid, motor paralysis. It is sudden in its onset, reaching its height within a few days, after which it shows a retrogression in extent, the final result being usually a permanent paralysis of considerably less extent than in the acute stage, or complete recovery may take place. This is the most common and easily

recognized form of acute anterior poliomyelitis.

"2. The ascending or descending type of paralysis runs the clinical course of a Landry's paralysis. Beginning usually in the lower extremities, the paralysis ascends until it involves, in some instances, the whole of the body; such cases usually terminate fatally from respiratory paralysis. In rare cases the paralysis is descending instead of ascending.

"3. The bulbar or pontine form is characterized by paralysis of muscles supplied by cranial nerves, having their nuclei in the medulla or pons.

"4. The encephalitic type is distinguished by paralysis due to lesions in the motor area of the brain, resulting in a spastic monoplegia or hemiplegia. This is the rarest type.

"5. In the ataxic type the characteristic motor disturbance is an acute ataxia, with or without paralysis.

"6. The polyneuritic type gives a clinical picture closely resembling multiple neuritis.

"7. The meningeal type includes, (1) cases which in their onset are characterized by marked symptoms of meningitis, but which result in spinal or bulbar paralysis; and, (2), cases in which the symptoms of meningitis are not followed by paralysis.

"8. The abortive types include cases showing the initial symptoms of acute poliomyelitis, but not followed by paralysis.

"The differentiation of these types depends upon the localization of the lesions in the central nervous system. The initial symptoms, before definite localization has taken place, are in a general way similar in all the types."

The following is taken from the Bulletin of the State Board of Health on "Infantile Paralysis."

"No specific treatment has been developed.

"The treatment in the acute stage must therefore be symptomatic directed along the same general lines as in other acute infectious diseases.

"Rest is important, and even in very mild cases should be enforced for a while after the subsidence of acute symptoms.

"Moderate purgation is recommended, and, if necessary, enemata. Diuresis should be promoted by the free administration of water, or by saline enemata, in cases requiring them. Hot packs are useful to promote diaphoresis, and to relieve the restlessness of the pains.

"The diet during the acute stage should be liquid, easily digestible, and nutritious.

"The administration of urotropin (hexamethylene-tetramine) is advised on the ground that formalin is excreted into the cerebro-spinal fluid. While there is no proof that this drug has any effect in modifying the

course of the disease, its use is free from any valid objection and is quite generally recommended.

"Except when absolutely necessary to allay severe pain, drugs which have for their purpose the relief of nervous symptoms should be avoided, especially the antipyretics and analgesics. Morphine or codeine may be given when necessary to allay pain.

"When symptoms or pressure are present a lumbar puncture may be made, with the hope of relieving this condition. This should be done, however, with the strictest aseptic precautions, but should not be undertaken by the inexperienced, and is not advised as an indiscriminate therapeutic measure.

"The effect of any treatment in the acute stage is extremely difficult to ascertain. Quite independently of any treatment, cases which have severe early symptoms may recover in a few days, with no paralysis at all, while other cases, with less severe initial symptoms, may result in extensive paralysis or death. The proportion of abortive and paralytic cases also varies greatly. In some epidemics half of the cases have been of the abortive type. It is therefore evident that even the complete recovery of a large proportion of apparently severe cases does not positively indicate that there was any specific virtue in the treatment which they received.

"It is, however, reasonable to suppose that the intelligent treatment along the lines indicated above will aid the patient in combating the infection, and will have some effect, however slight, in modifying the course of the disease.

"The objects of treatment after the subsidence of the acute stage are to promote the comfort and general nutrition of the patient, prevent contractures and deformities of paralyzed parts, and to maintain the nutrition of paralyzed muscles. The general health of the patient is usually good, and intelligent supervision of diet, ventilation, etc., is all that is necessary to maintain it. Tonics may be given, but the administration of strychnine in doses larger than are usually given in tonics, with the idea of its exerting a specific restorative action upon the spinal motor centers is to be avoided.

"For a considerable time after the onset of paralysis there is often pain in the paralyzed parts, due to sensitiveness of the nerve trunks. Motion may be very painful, and the limbs often become quite rigidly flexed. Hot baths, with gentle exercise, will do much toward relieving this pain and preventing or lessening contractures. Massage and electricity are contraindicated while pain and tenderness persist. Deformities must be prevented by

suitable mechanical appliances designed to keep the limbs in proper anatomic position.

"For the treatment of residual paralysis, after the subsidence of all acute symptoms, the reader is referred to standard text books on orthopedic surgery."

PREVENTIVE MEASURES.

The patient should be isolated and treated as if he had one of the dangerous communicable diseases. Bed clothes, curtains, rugs, utensils, etc., should be thoroughly disinfected by bichloride, boiling or formaldehyde fumigation. Members of the family should be prohibited from mingling with other people especially where children are congregated. The house placarded and guarded if necessary to prohibit visiting by neighbors.

The nurse and other members of the family should gargle their throats frequently with dilute peroxide of hydrogen, and spray the nose with the same of Dobell's solution, or a weak antiseptic. Hexamethylene tetramine should be given in five grain doses three times a day to all exposed to the disease. Children should be given proportionate doses. It has been found that this drug when administered for three weeks to monkeys before being inoculated in their brains, will prevent the animal from developing the disease in a large number of instances, while a monkey not so treated will be afflicted in 95 per cent. of the cases. This is claimed to be due to the fact that the germ is a very delicate organism and is easily killed by mild antiseptic. Formaldehyde has been found in cerebro-spinal fluid after a prolonged administration of the drug, and it is believed that this therapeutic measure, if used by the people of a community in the presence of an epidemic, will greatly reduce the number of cases, although late investigations seem to show that the liberated formaldehyde cannot act as antiseptic except in an acid medium, and is, therefore, useless in the spinal fluid, which is alkaline. The use of hexamethylene tetramine can do no harm, and may offer some measure of protection.

Public gatherings, as Sunday schools, churches, schools, moving picture shows, theatres, should be prohibited at the first stage of seriousness of an epidemic, and children should be kept at home, and away from trains and railway stations.

Common drinking cups should be abolished and liberal cleaning and sprinkling streets employed. Dust in some epidemics has seemed to play an important role in the spread of the disease.

Simple living, and attention to the functions of the body, should be employed, that

the resisting powers of the body may be kept at the highest point.

Complete isolation of the patient and restriction of the family should be maintained for about three weeks. At this time the house should be thoroughly fumigated with formaldehyde, or, if vermin are present, with sulphur.

The physician and nurse should employ the same precautions as in a case of scarlet fever.

The house and especially the patient should be thoroughly screened against the flies. Domestic animals, especially dogs, cats and chickens should not be permitted to associate with children.

SCIENTIFIC EDITORIALS.

THE 1916 MEETING OF THE A. M. A.

The Annual gathering of the American Medical Association which was held in Detroit on June 12, 13, 14 and 15, will go down in the history of the Association as one of its most successful meetings.

The rapidly growing city of Detroit received the large gathering of medicos with open arms. While its many hotels, notwithstanding the addition of cots to many of the rooms, were taxed to their capacity provision was made for those unable to secure hotel accommodations in lodging houses and many were housed in several of the large lake steamers which were moored on the river front.

The registration at Detroit exceeded that of any session since the Chicago session of 1908. The registration on the first day was 1690 as compared with 1244 at San Francisco in 1915 and 1075 at Atlantic City in 1914. At the end of the second day the registration had reached 3715 and third day 4303 which means that including the fourth day the official attendance was approximately 5000.

The scientific sessions were well attended. Moving picture demonstrations of scientific subjects added to the interest of most of the special sections.

The usual receptions, smokers, alumni dinners, boat rides, etc., furnished the social features of the meeting.

The manufactories which especially attracted the visitors were the Ford plant and Park Davis & Co.

The automobile service between the different hotels and the Park Davis works allowed the physicians to visit and inspect the laboratories, experimental stations, and factories between sessions.

The registration at the Section on Ophthalmology was somewhat over 400 and at the

section on Laryngology, Otology, etc., almost that number.

The section on laryngology devoted one day to a discussion of the nasal accessory sinuses and one day to the chronic middle ear suppurations. Neither brought out anything of especial interest or anything radically different from the teachings of rhinologists for the last ten years.

The tonsil operation which usually furnishes one of the chief topics of discussion in this section received little notice this year. The one tonsil paper by Dr. Greenfield Sluter of St. Louis, reviewed the work done by him and others with his method of operation and pointed out its advantages and disadvantages as compared with other methods of operation. Operative clinics were given by Sluder and others.

The Ophthalmological Section also presented little original work, though many practical papers were read. Ocular muscle defects and their treatment received the most consideration.

Dr. Wm. Zeutneyer, of Philadelphia, was elected chairman of the ophthalmological section for the ensuing year while Dr. Francis P. Emerson will preside over the otologists.

New York City was voted the next meeting of the Association.

ADOLPH O. PFINGST.

DERMATOLOGY AND SYPHILIS AT THE DETROIT SESSION.

The Detroit meeting was a most successful one,—we cannot understand how any physician could afford to miss it. While we acknowledge the shortcomings of dermatology and syphilis, nevertheless this combined branch has been making the most wonderful progress of late.

In the opinion of Morrow and Irvine, the teaching of dermatology and syphilis has been woefully neglected in a great many medical colleges, particularly in those of the south. They attribute this chiefly to the inadequate and poorly trained teaching staff, the short time devoted to this branch, the absence of scientific teaching and laboratory investigation, and the lack of classified clinics. Syphilis properly belongs to the domain of dermatology. With the great strides dermatology has made in the last few years, it is better adapted to cope with the magnitude of the syphilitic problem. It is refreshing to learn that the northern and eastern schools are enlarging the curriculum of dermatology and syphilis and are selecting more able and scientific men to handle these two important subjects.

The Wassermann reaction has been system-

atically studied and the conclusion reached that, notwithstanding the frequency of conflicting reports from different laboratories, this test is invaluable.

The inability to get salvarsan and neosalvarsan in adequate quantities on account of the war, showed conclusively how valuable these two drugs are in the treatment of syphilis and how extensively they have been relied upon. Now, however, salvarsan and neosalvarsan can be obtained at the moderate price of \$4.50 per tube. They will no longer be sold through the druggists, but will be sold directly to the physician. Intramuscular injections in divided doses are favored now by the best men, since statistics show the dangers of employing the salvarsans by the intravenous route.

Neoplasms have received considerable study in the last few years and successful attempts have been made at a more rational classification. Sutton and Hazen deserve great credit for their investigations. The consensus of opinion of the investigators is that the precancerous conditions should receive closer attention. Hazen particularly drew attention to two forms of epithelioma: prickle-cell and basal-cell. Basal-cell neoplasms frequently spring from seborrhoeic keratoses and from various other keratoses, such as those due to arsenic, and cutaneous horns also from subepidermal nodules (fibromas), sebaceous cysts and epithelial growths originating in the appendages of the skin; from various overgrowths of connective tissue epithelium; and, though rarely, from lupus, psoriasis, blastomycosis, leg ulcers or sinuses. Prickle-cells cancers rarely arise from seborrhoeic keratoses unless situated on the hands, but they more frequently follow arsenical and X-ray keratoses. Heidingsfeld states that they also originate in scars, sinuses, leg ulcers, wens and various chronic dermatoses. They have a single point of origin. They are situated very frequently on the mucous membranes, such as the lip, and they usually metastasize to the regional surface.

Pfahler, who is regarded as the best posted man in electro-therapy, has demonstrated that certain malignant conditions of the skin and mucous membrane, particularly of the mouth, can successfully be treated with diathermy and X-rays. X-ray therapy has advanced in favor in the treatment of malignant diseases, since men who are well versed in the technique and better posted in the knowledge of skin reactions, have taken hold of it. The wide-spread employment of the Coolidge tube and instruments devised for the more accurate measurement of the quantity and the quality of the ray and its penetration have

put X-ray therapy on a scientific basis. We can now administer X-ray treatment with the same accuracy as with drugs.

The writer of this editorial showed the intimate relationship between internal diseases and different dermatoses and especially the relationship of focal infection to certain dermatoses. He also called attention to Rosenow's research into the causes of herpes zoster, which opens a new chapter in the etiology of this obscure disease.

The syphilographers dwelt on the value of educating the public to the true character of syphilis and its dangers to posterity.

In the symposium of the pathology and pathogenesis of eczema, the essayists and the men who took part in the discussion came to the conclusion that the term eczema should be applied to eczematous conditions caused by or related to internal diseases, while dermatitis should be applied to eczematous conditions caused by external agents. Dr. White's scientific investigations in regard to the significance that can be attached to food tests in relation to the causation of eczema, proved very valuable. Similar investigations are being carried on in other cities. It is to be regretted that our southern medical schools do not devote any time to similar results.

M. L. RAVITCH.

DATE CHANGED

The Hopkinsville meeting will be held October 10 to 14 inclusive. This change in date was made because of a conflict in dates with the State Conclave, Knights of Pythias. Everybody please take notice.

ORIGINAL ARTICLES

THE AFTER EFFECTS OF DIPHTHERIA ON THE EYE, EAR, NOSE AND THROAT.*

By GAYLORD C. HALL, Louisville.

In order to illustrate the trend of medical opinion in reference to the use of antitoxin in diphtheria I quote from a paper of Dr. Hill published in the *Medical Record* of April 1911, on the High Death Rate from Diphtheria in the United States.

1.* "Year 1908. Rate per 100,000 of Mortality from Diphtheria."

Paris	7.0
Washington	35.4
Rhode Island	29.5
Colorado	28.4
Pennsylvania	27.6
New Hampshire	24.3
California	22.4
Vermont (lowest rate reported)	11.3

Louisville with a population of 250,000 had in 1913, 238 cases with 25 deaths; mortality, 10 per cent. in 1914, 310 cases with 27 deaths; mortality 8.9 per cent; in 1915, 175 cases with 12 deaths; mortality 6.9 per cent.

"He believes that the reason for this is that in the districts apart from the large medical centres, diphtheria is not recognized in a sufficient number of cases, and that antitoxin is not used either in sufficiently large doses or sufficiently often.

It may be safely taught medical students and physicians that antitoxin may be used early, in sufficiently large doses, and the doses repeated as often as necessary, and that, from a practical standpoint, the dangers of anaphylaxis may be disregarded."

I wish to call attention to the conservative manner of stating the belief in antitoxin and its use early and in sufficient initial dosage. Certainly to-day no two facts are more generally believed or considered more important. I wish to call attention to this matter at the start since it has an important bearing on the after effects of the disease.

Cases seen late or in which the antitoxin is delayed furnish the bulk of the mortality and all of the complications.

The exception to this statement is the rapidly fatal cases that overwhelm the system so quickly that all treatment is unavailing.

NOSE.

The cardinal symptoms of nasal diphtheria are a stopped up nose; the presence of the characteristic membrane and a sanious irritat-

*Read before the Nelson County Medical Society.

ing discharge which excoriates the upper lip.

The general symptoms vary greatly. There may be little or no systemic disturbance or the toxemia may be profound.

Systemic disturbances are apt to be severe when the organisms are very virulent, or a mixed infection, or when the membrane is situated high in the nostril or in the nasopharynx with their abundant lymphatic supply. I have several cases of nasal diphtheria in which complete casts of the nasal chambers were removed following large doses of antitoxin. Aside from the complications induced in remote organs through the toxemia the after effects in these cases are of varied nature. First, atrophic conditions. It is not uncommon to see cases of atrophic rhinitis whose incipency dates back to an attack of diphtheria. This disgusting disease as is well known causes a gradual erosion and destruction of the turbinal bodies with the formation of adherent stinking crusts that make life a burden to the patient and all with whom he comes in contact. While not the subject of this paper it is worthy of note that a great deal of work is being done on this disease and apparently the cause of it is the bacillus foetidus of Perez and Hofer. Vaccine therapy along these lines have given encouraging results in the hands of some investigators.

Second, accessory sinus disease may have its starting point in nasal diphtheria. When one considers the extent of the membrane formation in the nose it is surprising that invasion of these sinuses does not occur oftener.

If the ethmoid is involved it not uncommonly results in destruction of the sense of smell.

Finally, infection may persist in the nose after all clinical manifestations have ceased and the patient becomes a "carrier," infecting other people with virulent organisms. I will discuss this phase of the subject later.

NASO PHARYNX.

The profound toxemia arising from infection of the naso pharynx has been referred to. Another point of interest is that infection of the adenoid tissue in the vault is usually the starting point for the invasion of the ear.

PHARYNX.

The pharynx is the usual site of the initial infection in the disease, especially on the tonsils where over 90 per cent. of the infections occur, the membrane spreading to the pillars and adjacent structures. Usually there are no after effects left in this region except paralysis of the palate which will be taken up under the general discussion of paralysis.

LARYNX AND TRACHEA.

Until O'Dwyer, in 1887 brought forth his intubation set extension to or infection of the

larynx and trachea was one of the most serious and dreaded complications of this disease, carrying a mortality of about 50 per cent. Intubation markedly reduced this mortality though to the early use of antitoxin in sufficient doses must be given the credit for not only reducing the mortality in these cases but in a large measure preventing its occurrence, so that compared to twenty years ago laryngeal diphtheria is a rare affection. The after effects of laryngeal cases may be due to two causes, the tube or tracheotomy wound and ulcerations caused by the disease itself. The effect produced is practically the same in either case and there is produced paralysis of the cords, contraction and distortion of the larynx and trachea preventing proper speech and respiration. There is nothing so distressing or trying both to patient and doctor as the inability to dispense with the tube after the disease is at an end. We have oedema or hyperplasia of the tissues around the tube that gradually swell necessitating reintubation or replacement of the tracheotomy tube. Abductor paralysis of the cords produces the same effect.

Finally we may have strictures from cicatricial contraction due to pressure necrosis, or ulceration. At times after tracheotomy a swelling forms above the tube occluding the larynx above so that closure of the tracheotomy wound results in immediate dyspnoea or actual suffocation. No definite rules can be laid down for the treatment of these unfortunate. General tonics, especially strychnine, are of especial value. Electricity and massage of the parts according to the indication. All measures tending to promote the general resistance and strength are useful. Time is also an element of great value in handling these cases.

The local management of these cases is a highly specialized branch of a special subject. Some cases can be treated by dilatation, others by specially constructed intubation tubes or tracheotomy tubes extending above and below the wound. Sometimes, in extreme cases, external plastic work may become necessary.

EAR.

Infection of the ear in diphtheria is not so common as in scarlatina and measles but when it does occur is apt to be serious.

*II. Dr. C. R. C. Borden of Boston, in a paper entitled "Diseases of the Middle Ear and Mastoid Cells, Based upon a Study of 454 Autopsies and 2232 Cases of Diphtheria, Scarlet Fever and Measles," says, "In order that we may better compare the post-mortem with the clinical cases, I will briefly quote the few statistics available. Dr. McCollom reports 18 per cent of ear complications in scar-

let fever and 24 per cent in measles; Downie of Glasgow 12 per cent in scarlet fever, and 26 per cent in measles; Caiger 11 per cent in scarlet fever; Burekhart and Finlayson 10 per cent, and Alderton 11 per cent, in scarlet fever and but 15 per cent, in measles.

None of the above writers have mentioned the aural complications in diphtheria. The only statistics I know of in this disease are a small number of cases observed and reported by the writer in a previous paper, viz: 1-4 per cent. To further compare statistics in the same institution, I have gathered together 2232 cases of scarlet fever, measles and diphtheria. Of this number, 746 cases of scarlet fever showed 11 per cent of the aural complications; 456 cases of measles 28 per cent, and 962 cases of diphtheria 2.9 per cent. Sixty-eight cases of mixed infection were the highest in the percentage of all middle ear complications, viz: 44 per cent. Such statistics will vary considerably in different epidemics, with the season of the year, the institution in which they occur, and the community from which the patients have come." "From the statistics gathered thus far, we would naturally suppose complications of the middle ear and mastoid would follow the same relative frequency in fatal cases. The relative frequency is the same, but the percentage is far greater. In diphtheria instead of 2.9 per cent it is 82 per cent. In scarlet fever it is 94 per cent, and in measles 100 per cent, of middle ear or mastoid involvement. Again, we would naturally expect mastoiditis to follow the general course of the middle ear. As a matter of fact, however, the order is exactly reversed in the fatal cases. We find diphtheria least in the clinical, to be highest in the fatal cases in the number of mastoids. Thirty-one per cent of fatal diphtheria cases showed mastoid involvement. Twenty-six per cent, of the scarlet fever cases and but 14 per cent, of the measles cases had mastoiditis. This is a significant fact and is, I believe, the most important point in the entire subject."

Dr. Borden reports a number of autopsy findings in order to support his contentions and states that it is quite common to see diphtheria cases who without appearing to be seriously ill develop weakness and prostration and gradually die without definite symptoms of any kind. In these cases almost without exception severe infections of the middle ear and mastoid are noted. This brings us face to face with a very ugly situation. In none of these cases was a diagnosis made during life. The diagnosis is exceedingly difficult and the treatment equally hard to carry out. The cases usually occur in very young children and the symptoms are practically nil. There is no pain complained of. Restlessness

can not be depended on and temperature is usually attributed to the other conditions present. Metastatic symptoms occurring elsewhere in the body might direct attention to the ears though very often in such cases the infection has gone beyond our power to control.

The most important point to be emphasized in the treatment of these cases is that routine examination of the ear should be carried out daily and it is incumbent upon the practitioner to learn these simple means of examination and be able to detect beginning changes in the middle ear.

Borden finally reaches the following conclusions:

1. Infections of the middle ear and mastoid cells often occur early in the contagious diseases and remain for a considerable length of time without active symptoms.

2. Diseases of the middle ear and mastoid cells frequently occur in fatal cases without their presence being known during life.

3. Like the tonsil, these structures are the point of entrance into the blood of pathogenic bacteria.

4. In many cases, infected middle ears and mastoid cells are the primary foci of infection and inflammations in the heart, lungs, pleural cavity, joints, etc., are secondary to them.

5. Inflammatory symptoms in the above organs may be regarded as suspicious of infection in the middle ear or mastoid cells even though no aural symptoms are present.

6. In complications involving the heart, lungs, pleurae, joints, etc., no permanent improvement need be looked for until the original source of infection ceases to promote bacterial invasion of the blood.

7. Present methods of diagnosis are inadequate in many cases to detect aural complications in the contagious diseases.

8. Aural complications in these diseases are of far greater importance than was formerly supposed."

EYE.

Diphtheria manifests itself in the eye as a diphtheritic conjunctivitis. These cases are exceedingly rare and apt to be severe. It frequently results in loss of the eye through ulceration of the cornea. It is worthy of note that in these cases success has been obtained by the use of antitoxin locally as well as by its internal administration and this in spite of the fact that diphtheria antitoxin is not a bactericidal substance but acts by neutralizing the toxins of the disease.

Of more importance, because far more frequent, is the effect of diphtheria upon the ocular muscles, manifesting itself in paralysis.

The most common type is the paralysis of the ciliary muscle giving rise to a failure of accommodation also known as ophthalmoplegia interna. If the paralysis involves all the fibres of the third nerve we have a complete ophthalmoplegia with dilated, inactive pupil, ptosis, and paralysis of the superior, inferior, internal recti muscles and inferior oblique muscles. There has also been reported cases of paralysis of the sixth nerve effecting the external rectus. A further consideration of these conditions will be taken up under the general subject of paralysis.

DIPHTHERIA CARRIERS.

It has long been known that a certain proportion of cases, about 2 per cent, after recovery from diphtheria still harbor virulent organisms in the nose or throat without producing any clinical manifestations, yet capable of infecting other people. Furthermore people who have been exposed to diphtheria, notably physicians and nurses in infectious disease hospitals, often carry the organisms in their noses and throats and by this means infect other people. In the last few years serious efforts have been made to stamp out these so-called carriers of the disease and various methods have been used to render them sterile. Favorite among the measures have been the various chemical antiseptics which have been successful in some cases and failed in others. Iodine seems to hold the chief place among these agents. A spray of lactic acid bacilli in bouillon culture has been recommended by some observers though the success claimed has not been duplicated by others. A twelve hour bouillon culture of the staphylococcus pyogenes aureus has recently been recommended to quickly drive out the remaining bacteria and great benefit has been reported from its use with very slight by-effects such as small furuncles in the nose and a slight sore throat due to the staphylococcus which quickly passes away. Some observers, however, have not been able to confirm these results and the possible harmful effects of the staphylococcus infections has deterred others from its use.

*III. Miller has treated a small series of seven cases by spraying the throat with a solution varying in strength from 1-4 to 1 per cent of the usual 40 per cent. formaldehyde solution.

It is worthy of note that the diphtheria bacillus is exceedingly sensitive to heat, *IV 58 degrees C. sufficing to destroy bouillon culture. It has been found that a temperature of 60 degrees C. maintained for five minutes was sufficient to kill all diphtheria bacilli contained in the false membrane from a very virulent case. It has been found that air or

steam up to 85 degrees C. can be inhaled without any effects more than drying of the throat and that cases so treated recovered with remarkable rapidity.

Finally, the absorptive properties of Kaolin, *V, have been noted in the treatment of these conditions but its use has not been extended sufficiently to develop any definite conclusions from its use.

Since diseased tonsils and adenoids furnish the bulk of the cases acting as carriers, the best results are obtained by the removal of these organs after which the throats quickly become negative to culture. Recommendations for operations in these cases should be made with caution directly after recovery from the disease since the action of the toxin upon the heart muscle is severe and cases subjected to a general anaesthetic shortly after recovery for this disease end disastrously. In these cases the only thing to do would be to keep the case under quarantine until such time arrives that the operation could be successfully performed or when as a result of other means cultures made on succeeding days has proved negative for the third time.

PARALYSIS.

The most important after-effects of the disease are the various types of paralyses. The percentage of these cases occurring in any community vary with the severity of the epidemic, though more particularly with the time which elapses before treatment is instituted. The most elaborate study of these cases is by Rolleston, *VI, abstracted in *Progressive Medicine*, March, 1914. He gives the results of his observation on 2300 cases of diphtheria, all of whom were retained in the hospital for six weeks.

"In the 2300 cases, 477, or 20.7 per cent. showed some form of paralysis; 184 of these were severe, and 85 were fatal."

"Rolleston's cases have been classified according to their severity into six groups, and the following table shows the relation of paralysis to the character of the initial attack:

A. FAUCIAL CASES WITH OR WITHOUT NASAL AND LARYNGEAL INVOLVEMENT.

Character of Initial Attack.	Paralysis. Cases of all Kinds		Per-centage	Severe Paralysis cases	Per-centage
Case 1. very Severe	216	158	70.8	104	48.1
Case 2. Severe	415	193	46.5	65	33.6
Case 3. Moderately Severe	169	39	23.6	3	1.7
Case 4. Moderate	498	68	13.6	9	1.8
Case 5. Mild	890	23	2.5	---	---
Case 6. Very Mild	62	---	---	---	---
	2250	476		181	

B. NASAL CASES ONLY.

Severe.....1	No Paralysis
Moderate.....2	
Mild.....20	
Very mild 3; 1 case	

C. LARYNGEAL CASES ONLY

Severe.....11	No Paralysis.
Moderate.....8	
Mild.....1	

In 216 very severe cases, there were 50 deaths from toxemia before any paralysis developed, so it will be noted that, in these very severe cases, all but 13 of the survivors were effected. There were 107 cases of the most malignant form of diphtheria, sometimes spoken of as hemorrhagic diphtheria. All of those that survived had paralysis of a severe kind. It was also remarkable that paralysis was much more frequent and severe in children in which the nose was involved as well as the throat. Thus, in 570 faucial and nasal cases, there were 240 paralysis cases, or 42.1 per cent, 133 of which were severe, as compared with 237 paralysis cases, or 14.1 per cent., 51 of which were severe, among 1680 cases of faucial diphtheria including laryngeal cases but excluding those with nasal involvement. Only one of the purely nasal cases developed paralysis, and that only a very slight one, and no paralysis followed any of the 20 purely laryngeal cases.

The relation of paralysis to the administration of antitoxin is of extreme interest, and the following table shows the relation of paralysis to the day of the disease on which the antitoxin was injected:

Day of Disease	Total No. of Cases Injected	Paralysis Cases	Percentage	Severe Forms Only	Percentage
1st day	83	3	3.6		
2nd day	461	65	14.9	18	3.9
3rd day	541	116	21.4	41	7.5
4th day	460	124	26.9	46	10.0
5th day	304	80	26.3	41	13.4
6th day	166	45	27.1	21	12.6
7th and later	215	40	18.6	17	7.9
	2230	273		184	

We noted that the earlier the antitoxin is injected, the much less frequent is the paralysis. It is quite probable that in the pre-antitoxin days there were not as many cases of paralysis as since its use, but this is due to the fact that a very large proportion of cases which formerly died are now saved, and these are the severe cases in which paralysis is apt to occur. The use of antitoxin, even late, tends to diminish not only the complications of the nervous system but all others as well. The date of onset and the frequency in each form of paralysis is admirably shown in the following table:

	Palatal	Ciliary	Squint	Cardiac	Labial	Pharyngeal	Diaphragmatic
1st week	29	--	--	31	--	--	--
2nd week	109	--	--	49	--	--	--
3rd week	67	8	10	--	--	--	--
4th week	40	87	9	--	1	1	1
5th week	32	91	12	--	8	4	1
6th week	40	34	11	--	17	14	4
7th week	14	12	19	--	13	15	3
8th week	--	4	19	--	10	2	7
Percentage	831	236	80	80	49	36	16
Frequency	14.3	10.2	3.4	3.4	2.1	1.1	0.6

During the first two weeks, the only forms of paralysis which occurred were those involving the palate, and the so-called cases of cardiac paralysis. These latter cases could probably be more accurately classified under the heading of vasomotor paralysis.

Ocular paralyses are most apt to occur during the fourth and fifth week, although some occur during the third, and paralysis involving the lips, pharynx, or diaphragm most always occur late, that is, during the sixth, seventh, or eighth week, although occasionally it is noted as early as the fourth or fifth week. In other words, if the patient goes through the first two weeks without any serious paralytic involvement, nothing of a serious nature need be feared before the fifth week. During the fifth, sixth, seventh and eighth week, very severe forms may make their appearance. The knee and ankle-jerks are usually lost at an early stage but the superficial reflexes are not abolished until there is a condition of general paralysis.

The duration of the paralysis varies. The paralysis of the palate rarely lasts more than three weeks, with the exception of the cases of early onset in which there is nasal voice, and these may sometimes last for two months or longer. The average duration of the cases coming on very early was 41.19 days, the longest period being eighty-five days, but in the later cases, that is, those coming on after the end of the second week, the average duration was only 17.4 days. Ocular palsies generally last about three weeks. Of 210 cases of ciliary palsy, in which the duration could be fixed, the average period was 21.4 days, and the longest period forty-six days. In 62 cases of squint, the average duration was 18.4 days, the longest period being forty-three days. The average duration of complete paralysis of the larynx necessitating artificial feeding by nasal or rectal tube was 11.4 days, the longest period being twenty-two days. Diaphragmatic paralysis is of much shorter duration, the average being 7.8 days, and complete loss of motor power in the legs rarely lasted more than ten days. There are no protracted cases of paralysis in Rolleston's series, although a few chronic cases have been reported by other observers.

The mortality in Rolleston's series was not large. Of the 2300 cases, 171, or 7.4 per cent. died. If 33 cases which died within twenty-four hours of admission are subtracted, the mortality is reduced to 138, or 6.0 per cent. Eight-five deaths were due to paralysis, but in only five did the paralysis start after the end of the second week, and all of these were due to paralysis of the diaphragm. In the remaining 80, death was due to cardiac par-

alysis, the first signs of which had arisen before the beginning of the third week.

The prognosis of diphtheritic paralysis will be seen to depend upon the age of the patient, the date of the onset, and the location of the paralysis. The older the patient, the better the prognosis. There were no fatal cases over the age of thirteen, and no case of paralysis of the pharynx was met with over fourteen, nor of the diaphragm, over eight years of age. The only forms of paralysis which are liable to prove fatal are those involving the vasomotor system and so-called cardiac form, the pharyngeal and the diaphragmatic. The occurrence of paralysis of the palate during the first two weeks is a bad sign; many of these cases subsequently develop fatal cardiac paralysis, and, in any event, the early palate cases last longer than those which come on later. Another very curious observation has been made by Rolleston, and that is that the occurrence of a well marked serum reaction, occurring at the usual period after the injection, is a favorable sign, and it was found to be very exceptional for the patient to die from cardiac paralysis in whom an urticarial eruption has been well developed.

The treatment of paralysis in these cases requires a word. The early use of antitoxin in sufficient doses is the best means of preventing it. The patient should be at rest in bed for varying periods, depending upon the severity of the case. In mild cases, the patient may be allowed to sit up by the end of the third week, but in severe cases it is well to keep the patient recumbent for six weeks and allow him to sit up then, only if no paralysis has developed. Where paralysis is present, longer periods of rest may be necessary."

In closing I wish to thank the members of the society for their kind attention and to apologize for the length of the paper. I also wish to acknowledge the assistance obtained from the review of this subject in *Progressive Medicine*, from which I have very freely quoted as will be noticed under my table of references.

REFERENCES

- I. *Progressive Medicine*, March, 1912.
- II. Transactions of the Ninth International Otological Congress.
- III. *Progressive Medicine*, March, 1915.
- IV. *Progressive Medicine*, March 1913.
- V. *Journal A. M. A.*, March, 1916.
- VI. *Progressive Medicine*, March, 1914.

If each individual in Kentucky would practice the principles of hygiene and sanitation, the death rate would be reduced one-half, the wealth of the State would more than double, and Kentucky would have a world-wide reputation as being the healthiest spot on earth.

MODERN TREATMENT OF DIPHTHERIA.*

By J. I. GREENWELL, New Haven.

Diphtheria is an acute infectious disease caused by the Klebs-Loeffler bacilli. This bacilli will grow on any mucous membrane and on the skin where the epidermis has been removed. At the sight of this growth the bacilli generates a toxine. This toxine causes the formation of a false membrane. This toxine is absorbed by the lymphatics and carried into the general circulation and then carried to all parts of the body and exerts its influence on the cells of most all of the important organs of the body, namely, heart, nerve centers, kidneys and lymphatic glands. Diphtheria is then a true toxine and our treatment must be based on the neutralizing of this toxine and to assist nature in repairing all damage done the organs.

In taking up this treatment I will first divide it into prophylactic, immunizing and curative.

PROPHYLACTIC.

Enlarged tonsils and adenoids predispose any inflammatory disease of the throat, hence any child having such trouble should be treated and, if necessary, the tonsils and adenoids removed. During an epidemic great caution should be exercised in removing such tonsils and adenoids, as their removal leaves large raw surfaces extremely susceptible to infection and should diphtheria develop, a severe case will result.

All cases should be quarantined. The room should be well ventilated and should have sunlight and an open fire-place. The temperature as nearly regular as possible. All rugs, carpets, curtains and all unnecessary articles should be removed from the sick room. All pets, such as dogs and cats, must be excluded. Also all toys used by the patient should be boiled or burned. All dishes, after leaving the sick room, should be boiled. It is needless to say that no visitors should be allowed in the room. All clothes from the patient and from the bed should be put in a solution of carbolic acid until they can be boiled or burned. If the disease is in the form of an epidemic the school should be closed.

IMMUNIZATION.

When a case develops in the family all other children should be given an immunizing dose of antitoxin. The dose being from 500 to 1000 units, depending on the age of the patient and the duration of the infection. It has been my custom in the past, and if I can get the consent of the parents, to give a dose

*Read before the Nelson County Medical Society.

to all children when a case develops in a school or during an epidemic in town. This practice I think I shall abandon as diphtheria is so easy to diagnose and to control if seen early and on the other hand on account of so many annoying and occasional dangerous reactions liable to follow a primary injection. The danger from anaphylactic manifestations is, however, very slight if persons who are especially susceptible are excluded, namely those affected with asthma. The danger from producing a hypersensitiveness to subsequent injections may be obviated by using a prophylactic injection of an antitoxine made from animals other than the horse, namely the cow and sheep. It is a well-known fact that certain individuals contract diphtheria when exposed to the infection and others may harbor bacilli in the throat without having any acute infection either through antitoxin in the blood or their ability to produce antitoxin very promptly.

Schick has devised a method by which the presence of diphtheria antitoxine may be determined more easily than by previous methods. A minute quantity of toxine is injected into the skin and local reaction does not follow if diphtheria antitoxine exists in the blood, but it does occur if there is none. The reaction occurs within 24 to 48 hours, and consists of a local redness and infiltration and subsequently leaving pigmentation and slight scales. With the amount of toxine injected, according to Schick, it is necessary that, at least, 1-30 of a unit of antitoxine to each cubic centimeter of blood be present in order to prevent the appearance of reaction. H. K. Mulford & Co., and others have this toxine on the market ready for use. Schick also observes, together with others, that immunization to diphtheria exists at birth in about 90 per cent. and reaches 50 per cent at the age of 1 year and falls to 40 per cent from 2 to 5 years and raises to 90 per cent. in adults. The above figures indicate the prophylactic injections are unnecessary in most infants and adults and especially indicated in children from 2 to 5 years.

The Behring Toxine-antitoxine vaccine which is a mixture used by some with marked success, as it is only in its experimental stage, has not come into general use. It promises to give much longer immunity than the diphtheria antitoxine and has not the objectional features of antitoxine.

CURATIVE.

Since the introduction of diphtheria antitoxine it has displaced all other treatments. The purpose of the treatment is to give enough antitoxine to neutralize the toxine in the body before permanent damage is done to some of

the vital organs. We have no method of measuring the toxine already in the body. The longer the case has been standing and the more extensive the surface involved the greater the intoxication. Hence the dose of the antitoxine to be given must be governed by considering the above factors. A physician is frequently called to a case where the diagnosis is not clear at the first visit. Whether the case be diphtheria, tonsillitis, syphilis or some other condition of the throat antitoxine will not hurt any of these cases and the early use will shorten the duration if it be diphtheria. The same is true of croup. When the attack does not subside in 4 to 6 hours the dose from 3,000 to 20,000 units, to be governed by the age of the patient, location of the infection, duration of the infection, and the severity of the infection, and repeat in 12 to 24 hours if you do not see marked improvement.

SITE AND MODE OF INJECTION.

It is needless to say that all injections should be made with the strictest aseptic precautions and the injections must be made where there is sufficient loose tissue and to interfere as little as possible with the patient obtaining a comfortable position in bed. After the injection a wet dressing should be applied. In addition to antitoxine there are other conditions to meet; to strengthen the heart, and relieve the strain on the kidneys. To relieve the strain on the heart the patient must be kept in bed and not allowed to get up for anything. Only a short time since I had a sudden death in diphtheria to occur just after the patient was placed in bed after being on the commode.

The food should be milk alone until the membrane leaves the throat. At this time if the urine shows no albumin the amount of food may be gradually increased.

The patient should remain in bed 10 days and if the pulse is normal and the urine shows no albumin the patient may be allowed to sit up.

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Of all diseases common to man, consumption is the most wide spread and the most deadly. Other diseases have caused more dismay, more panic, and occasionally, for short periods, even wider destruction, but consumption has been the most constant and the most pestilential of all; the worst scourge of mankind.—Illinois State Board of Health, December 1907.

SYMPOSIUM ON GLAUCOMA

PATHOLOGY OF GLAUCOMA.*

By W. D. LEVI, Louisville.

Etiologically, primary glaucoma becomes more rather than less of a mystery as research puzzles over it. Each decade yields its quota of fascinating theories which do little more than controvert the theories that obtained before, and never outgrow, being just theories.

Since Mackenzie recognized increased intra-ocular pressure as the essence of glaucoma, and Von Graefe employed iridectomy for its relief just sixty years ago, progress has been slow and painful.

We agree that the common cause of increased intra-ocular pressure is *obstruction* of the *filtration angle*. This may arise from one or more of the following factors:

(a). Pressure of the vitreous is greater than pressure of the aqueous, causing forward displacement of the root of the iris against the pectinate ligament and posterior surface of the cornea;

(b). Structural alterations in the channels of filtration, congenital and acquired.

(c). Alteration in the consistency of the aqueous.

(a). Vitreous pressure *might* exceed aqueous in the following ways, some of which are probably imaginary:

1. Alterations in the hyaloid membrane which disturbs its osmotic properties and inhibits the escape of ciliary secretion forward.

2. Increased water absorbing power of the vitreous after vitreous hemorrhage or exudation. In this category belongs Fisher's theory that glaucoma is oedema of the eyeball, due to the presence in the organ of a substance which increases the affinity of the tissue colloids for water.

3. Sarcoma of the choroid and hemorrhage or serous exudate beneath a detached retina.

4. Occluded and secluded pupils in iritis.

5. Perforative ulcers and wounds of the cornea.

6. Priestly Smith, observing that glaucoma attacks mostly the senescent and senile, whose lenses are approximately 30 per cent. larger than they were at the age of 25, observing that hyperopes with hypertrophied ciliary bodies are predisposed to glaucoma; and that the diameter of the cornea of glaucomatous eyes is smaller than that of eyes unaffected by glaucoma, arrived at the conclusion that glaucoma is produced by occlusion of

the circumlental space. Increased vitreous pressure forces the ciliary processes and base of iris against the back of the cornea, shutting off the filtration angle. He has been asked to explain, then, why iridectomy and eserine correct the condition, and why in eyclitis when the ciliary body is swollen to its maximum, glaucoma is not invariably produced and when it is produced the condition is transient.

(b). Under structural alterations of the channels of filtration, acquired, we have another theory representing interesting technique, that of Henderson. He maintains that sclerosis of the pectinate ligament is physiological, and that this sclerosis is the *constant* factor in the causation of primary glaucoma. In consequence of this, there is some mechanical obstruction to the outflow of aqueous into Schlemm's canal. Small variations are adjusted by supplementary drainage through the iris crypts and veins. Add to this constant factor of sclerosed pectinate ligament one or more of the following variable factors:

1. Dilation of the pupil which closes iris crypts.

2. Rise of arterial tension causing rise of intra-ocular tension with co-incident compression of veins.

3. Rise in venous pressure with increase of blood in the eye, and *congestive oedema* of the iris will occur, causing periphery of the iris to be pressed against the filtration angle. If this contact persists, peripheral adhesions form which block the filtration angle more or less completely. Other observers think they have proven that sclerosis of the pectinate ligament is not the cause of oedema but the result of previous synechia. Buphthalmia belongs here under structural alterations of filtrating channels. Treacher Collins believes that there is a want of separation between the base of the iris and the cornea in congenital glaucoma. Some other pathologists have failed to find the canal of Schlemm present.

(c). Alterations in the consistency of the aqueous are caused by pus, exudate, exotic cell proliferation, globulin from traumatized lens, etc.

The practical benefit one derives from these considerations is to learn to suspect middle-aged and old eyes which are hyperopic, have small corneas, and shallow anterior chambers of being glaucomatous or predisposed to the disease. Heredity, vascular sclerosis, and high blood pressure are also predisposing causes.

I will consider the pathological anatomy and symptomatology collaterally. Practically all the subjective symptoms and the congestive oedema—atrophy—degeneration se-

*Read before the Louisville Eye, Ear, Nose and Throat Society.

quence can be very logically accounted for by increased intra-ocular pressure.

The *lid and conjunctival swelling* in acute glaucoma is reflex oedema due to pressure on the ciliary nerves and irritation of the vaso-motor fibres of the sympathetic. This appearance may lead the patient to give a history of erysipelas in extreme cases.

The *anterior ciliary veins* which usually conduct away only a small part of the venous blood from the ciliary body are dilated and tortuous in acute cases giving the sclera a very congested appearance. This appearance is peculiar to glaucoma. In old eyes, especially those weakened by antecedent choroiditis, the sclera may become staphylomatous, especially at the equator.

The *cornea* becomes hazy from two causes. One is inflammatory oedema of the epithelium and the anterior layers due to pressure and the other is the double refractive index of the corneal fibrillae. This haze accounts for the halo about lights in the prodromal stage, and contributes to the defective visual acuity in acute and chronic glaucoma. Anesthesia of the cornea is probably due to compression of the long ciliary nerves against the unyielding sclera. This intraocular nerve pressure, especially those branches to the iris and ciliary body, causes the terrific spontaneous pain which radiates along the first and second divisions of the trigeminal nerve. Also accounts for tenderness.

The *anterior chamber* in secondary glaucoma may be deep due to changes in the aqueous, but in primary glaucoma it is shallow. The root of the iris approaches the pectinate ligament, and periphery of the cornea, or lies in contact with these parts or has become agglutinated to them. Some observers think that the aqueous is cloudy. It is agreed that the aqueous is more albuminous than normal.

In acute glaucoma the compression causes oedema and great venous engorgement of the *iris*, distorting its appearance. Later the oedema subsides, the veins empty, the stroma atrophies and shrinks. The pigment layer of the iris suffers least of all, and ectropion of iris is found in widely dilated pupils. The *pupil* is dilated on account of paresis of the iris fibres of the oculomotor nerve. It is oval, transversely, and nearly never adheres to the lens. In these things it differs diametrically from iritis.

The *ciliary processes* in acute cases are greatly swollen and extend centripetally toward the lens and forward to base of the iris, blocking the filtration angle. In old cases they are shrunken and atrophied. The ciliary muscle atrophies too. In glaucoma simplex the patient becomes rapidly presbyopic

due to this failure of the ciliary muscle. Parenthetically I may say that glaucoma sometimes widens the curvature of the cornea making for hyperopia and sometimes lengthens the eye antero-posteriorly causing myopia.

The *choroid* experiences first congestion, then atrophy. Round cell infiltration around the vortex veins with proliferation of the endothelium causing contraction or obliteration of the lumen is a point which interests some etiologists. The retina in the acute stage is ischemic. This causes concentric contraction of the field, especially nasally; atrophy, following, accounts for loss of first peripheral, then central vision. The field is contracted concentrically or with greater nasal defect or irregular scotoma. The ganglion cells are destroyed which secondarily may cause atrophy of the optic nerve fibres in disc and nerve trunk, although, disc excavation with fibre atrophy usually precedes ganglion atrophy.

The disc first shows congestive oedema then cupping. The lamina cribrosa recedes considerably. The nerve head is destroyed by pressure, neuroglia supplanting to small extent the fibres. Apart from pressure, atrophy of the nerve head is in many cases due to chronic interstitial neuritis.

It is essential in the study of every case of *suspected glaucoma* to examine the fundus and take the field with the perimeter at the earliest possible moment. These examinations must be made not once but many times on different days and at different hours. Yet more important is the eliciting of tension. We believe that the tonometer should be used routinely in all suspected cases. Surely we can acquire skill in the use of this instrument much more quickly than we can acquire the erudite touch. We will probably make fewer mistakes and our records will become standardized.

Glaucoma must be differentiated from *iritis* and *irido-cyclitis*. The history is helpful. In glaucoma there is no small cell infiltration, which is the phenomena of true inflammation. The pupil is dilated. Fuchs says, "The absence of exudation is, in spite of the external symptoms of inflammation, just the characteristic feature of inflammatory oedema. Post synechia are exceptional; hypopyon and pupillary membranes are never observed." The converse is true of iritis. In iridocyclitis the tension is seldom above T.+1 and never over T.+2, and is often only transitory.

Fifth nerve pain may divert attention from the eye to the head, vomiting to the stomach. In simple glaucoma, where there may be no

external symptoms whatsoever, no manifest tension or only slightly increased intra-ocular tension, the excavation of the optic nerve and a close study of the field are the only means we have of making a differential diagnosis from simple optic atrophy. The history may be of value. The tonometer should be applied repeatedly and this alone will sometimes be sufficient to make the diagnosis.

The optician often mistakes glaucoma for cataract and advises the patient that a cataract is forming and that blindness must intervene before sight can be restored. Following this advice the patient becomes so eternally blind that no optician, no matter how solicitous, could do him any further harm.

MEDICAL TREATMENT OF GLAUCOMA.*

By I. A. LEDERMAN, Louisville

While in the majority of cases of glaucoma an operation is indicated, medicinal treatment is at times of great value. In the prodromal stage the use of myotics will usually relieve the symptoms and frequently ward off an acute attack. Even when an acute attack has been established the prompt use of myotics may be followed by rapid lowering of intra-ocular tension and relief of symptoms. Myotics presumably exert their action by contracting the pupil, thus drawing the iris away from the filtration angle, allowing the space of Fontana to open and drain. The most powerful myotic is eserine sulphate or salicylate. The usual strength of solution is one-half to four grains to the ounce. Strong solutions have a decidedly irritating effect on the conjunctiva; likewise the continued use of eserine is likely to cause a well known form of irritation designated, eserine conjunctivitis. In view of this ill effect it is wise to use as weak a solution as possible. The solution should be frequently renewed and not allowed to become stale, and a conjunctival wash of boric acid solution prescribed. Even with these precautions, the conjunctiva may resent the long continued use of eserine. It is some times advisable to use the alkaloid eserine dissolved in oil—preferably castor oil.

We have in pilocarpine an efficient substitute which may be combined with eserine or used alternately. Pilocarpine is not quite so powerful but is less irritating and can be used indefinitely without affecting the conjunctiva. The usual strength is one to five grains to the ounce. These two drugs are the sheet anchor of the medical treatment of glaucoma though their effect may be enhanced by the lymph-

agogue action of dionin. Adrenalin chloride has also been used, but is uncertain and may even increase tension.

In severe acute inflammatory glaucoma, the congestion may be lessened to a certain degree by the application of two or three leeches to the temple; or the artificial leech may be employed. Hot fomentations are always agreeable and have a beneficial effect on the inflammatory process, as well as tending to relieve the pain. In the way of constitutional treatment, elimination is naturally the first requisite, then large doses of salicylate of soda should follow and may give a happy result. There is nothing to compare with a hypodermic of morphine for the relief of pain during an attack of acute glaucoma. Even though its effect is temporary it is advisable in the severe forms, for it not only relieves the pain but by the relaxation produced and the rest and sleep it makes possible, the congestion and increased tension are favorably influenced. Chloral has a similar effect. The subconjunctival injection of citrate of soda in four or five per cent. solution has been advocated. I have seen prompt reduction of tension in several instances follow its use but its effect was so transitory that no permanent benefit was derived therefrom. The operation of iridectomy will usually cut short an attack of acute glaucoma. It is advisable, in order to render the operation less difficult and more effective; to obtain a reduction of tension and a restoration of the anterior chamber by the treatment outlined, before attempting the operation. These efforts should not be persisted in too long, however, else the optic nerve will be deeply cupped and the vision permanently affected.

With reference to the chronic simple glaucoma, there is still a diversity of opinion regarding the relative efficacy of medical and operative treatment. Eserine and pilocarpin used alternately and in weak solutions over a long period of time suffice in some cases to control the disease for a long time. The pupil must be kept constantly contracted. In other cases the disease progresses steadily in spite of persistent and intelligent treatment. Appreciable increase in the tension may not be a factor in the disease and yet we see typical cupping of the optic disc and note a gradual narrowing of the field of vision. Iridectomy or sclerotomy followed by treatment with myotics may serve to hold the disease in check for a time.

Massage of the eye-ball is helpful except in the presence of an acute attack of glaucoma. It is followed by a temporary reduction of intra-ocular tension and is an easy procedure which the patient can be taught to carry out several times a day.

*Read before the Louisville Eye, Ear, Nose and Throat Society.

Strychnine and nitroglycerine are given in the chronic cases; the latter especially if there is increased vascular tension. It has been proven, however, that there is no connection between intra-ocular and general vascular tension, and that they may or may not be associated.

CHOICE OF OPERATIONS.*

By ADOLPH O. PFINGST, Louisville.

At the outset of my discussion of that part of the subject assigned me, I wish to say that my experience is practically limited to the iridectomy and hence I am in no way able to discuss the other operations and will have to draw my deductions from the experience of others. In discussing the surgery of glaucoma I cannot help but eulogize again the name of that great master Von Graefe, who was fearless enough to use a knife upon an eye apparently in a high state of inflammation.

You know, of course, that various operations have been introduced since Von Graefe's achievement and too, that none of them have supplanted his original iridectomy, especially in the acute form of the disease. In reviewing the operations briefly you will permit me to recall that the classical iridectomy has for its purpose the opening of the infiltration angle of the iris by a wide and peripheric operation and aims at a solid closure of the wound.

All of the other operations have for their purpose the establishment of a filtering catrix. It was the observation that whenever, after an iridectomy the edge of the coloboma would catch in the wound and accidentally establish a fistula these cases nearly always led to good results that led up to the other operations.

The operative methods introduced to bring about a permanent filtration of the eye depend either upon the entangling of the iris or other tissue in the wound or by complicating the form of the wound so as to prevent its closure. The entanglement of the iris in the wound is spoken of as iridocleisis. This was done intentionally by some operators—but was abandoned as the presence of the iris in the wound could hardly be looked upon as ideal. The same can be said of the infolding of conjunctiva which has been practiced by some. Threads have also been used for the same purpose but with little success.

The wedge operation which has for its purpose the subconjunctival separation of a strip or wedge of sclera, leaving it attached to the conjunctiva and the trap door operation, in

which the linear incision is supplemented by an incision at right angle to it, thereby forming a tongue-like flap—both introduced by Herbert are now but little practiced.

Instead of modifying the incision as such, other methods were soon introduced—that purposed the actual removal of a piece of the sclera. The first of these was the one of Lagrange, spoken of as the sclerecto-iridectomy.

This operation had many followers but has also been abandoned by the introduction of the trephine which is based on the same principles as the Lagrange operation. However it is easier of application and leaves a less ragged scleral wound.

The original trephine was applied to the sclera as near the cornea as possible (Fergus), but has been supplanted by the Elliot operation, whose purpose it is to enter the cornea as near the sclera as possible thereby filtering the anterior chamber. It is really a corneo-scleral trephining.

To get the kernel of my subject the question of the choice of operations, I will quote largely from a paper by Priestly Smith, read before the International Congress of Medicine. Smith sent out letters to 120 operators asking them to state their choice of operation in the acute and in the chronic primary glaucoma, and to state the results.

In the acute cases, all but 19 of the 120 employed the iridectomy some with and some without scleral puncture. Of the nineteen not employing iridectomy 9 did the trephining operation apparently with good results and the others were divided among the other operations mentioned. Elliott himself, in recent years, employs the trephine in acute cases. In the chronic or simple glaucoma we find many advocating the trephine operation over iridectomy.

Of the 120 operators, 56 favor trephining, while 31 still employ iridectomy. Most of these adhere to it as they have as yet tried no other operation. Quite a number of the operators (seventeen) employ Herbert's trap door operation and some (ten) still employ the Lagrange method.

The advantages claimed for the trephining operation may be summarized as (1) ease and safety of execution; (2) absence of astigmatism afterwards; (3) thorough and permanent reduction of tension.

The disadvantages mentioned are (1) risk of losing the trephined disc in the anterior chamber; (2) persistence of abnormal tension; (3) frequent occurrence of posterior synechia.

The last was the disadvantage claimed by most of the operators. There is an undoubted tendency to an insidious iritis or as Elliott calls it "quiet iritis". It is especially feared

*Read before the Louisville Eye, Ear, Nose and Throat Society.

because it is not accompanied by the ordinary signs of inflammation of the iris. There is no pain, the pupil is not especially narrow and in fact nothing to denote the insidious process which if untreated eventually lead to exclusion or occlusion of the pupil. Elliott advocates the use of atropine in all cases beginning on the third day to keep the pupil wide unless it is already widely dilated.

From what has been said we may conclude that the time honored classical iridectomy, at times preceded by a scleral puncture is the choice of operations in the acute cases, and that the best operation in the chronic cases seems to be one that will bring about permanent filtration of the eye and that at present seems to be the trephining according to Elliott.

OPHTHALMIA NEONATORUM AND TRACHOMA.*

By J. G. CARPENTER, Stanford.

OPHTHALMIA.

Prof. de Schweinitz of Philadelphia, the distinguished oculist, states in his "Book on Diseases of the Eye," that "The conjunctiva is liable to various grades and types of inflammation which have certain symptoms in common: viz., photophobia, tenderness, pain, alter secretion, changed appearance of mucous membrane, varying from a general infection of the blood vessels and slight velvety opacity, to the development of special pathological products, spasm of eyelids or blepharo-spasm, or the formation of false membrane."

"The generic term conjunctivitis or ophthalmia, is applicable to this entire group of diseases."

Having these premises to reason from, we hope to deduce certain obvious consequences in etiology, symptoms, pathology, diagnosis, prognosis, sequelae, complications, prevention and successful medical and surgical treatment. These two subjects, ophthalmia neonatorum and trachoma, are Herculean and volumns could be written on them.

We are writing for the benefit of the general practitioner and not the ocular specialist, and are mindful of the axiomatic aphorism that the shortest distance between two given points is a straight line and hope to plan through this task, blaze the way through the wilderness, and hew to the line and erect certain sign boards so that the general practitioner can handle these two subjects with intelligence, wisdom, common sense, and skill, in the sciences of medicine and surgery, in other words, we must "get there Ely" and by the

general practitioner being thus prepared, he will be able to add to his reputation, *be busy, be a greater benefactor* and make a better support for himself and family. "So mote be! Selah!" We are still seeking light and more light.

Simple Ophthalmia, Catarrhal, Acute or Muco-Purulent, Conjunctivitis, or Ophthalmia.—In the beginning God said let there be light, and there was light. The general practitioner should have his share of light and be re-invested with what he has been divested by the eye specialist: the true oculist is great among the greatest—but the pseudo-oculist, the "pain" or "knave" of our beloved profession, takes a three or six weeks course or the eye, returns home, advertises himself as an oculist, and too often devotes his time to knavery, in all its malicious forms.

A doctor, to be a respectable, intelligent, skillful practitioner in diseases of the eye should be educated in some first-class college and hospital like the Medico-Chirurgical College and Hospital of Philadelphia, under the tutorship of a Prof. L. Webster Fox, De Schweinitz, Risley or Jackson, and should have served an apprenticeship in general practice for five or ten years, then as a fellow craft and master workman in general practice, be an Hiram of Tyre in his profession; then adorn himself and his calling with that of specialist in diseases of the eye, or any other line of specialism.

At the Medico-Chirurgical College of Philadelphia, the graduate has to show equal proficiency in the knowledge and treatment of diseases of the eye that is required in other branches. An oculist to succeed must, of necessity, have been an able general practitioner and dermatologist. A grand master in his profession.

Mechanical ophthalmias or conjunctivitis comes from exposure to wind, dust, dirt, grit, or traumatism.

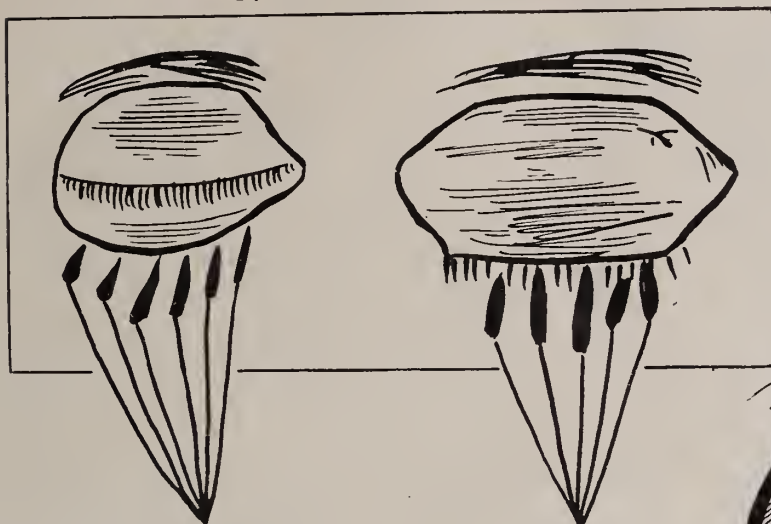
Associated ophthalmias are seen with catarrhal inflammations of nose and throat diseases, eczema and other skin diseases, facial erysipelas, impetigo contagiosa; rheumatism, bronchitis, typhoid fever, exanthematous ophthalmias, measles, scarlet fever, roseola, small pox and diphtheria and croupous conjunctivitis,

Sympathetic Ophthalmias—(Disease in one eye affecting the other eye)—Sympathetic ophthalmia may occur from eye strains, uncorrected ametropia, relieved by proper glasses.

Special Ophthalmias—Epidemic conjunctival catarrh, where the process is more specially located upon the retrotarsal folds; and in this group may be included pink eye, episcleritis, seen in the fall, winter and

*Read before the Kentucky Midland Society at Lawrenceburg.

OPHTHALMIA NEONATORUM

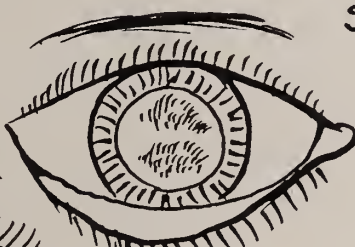


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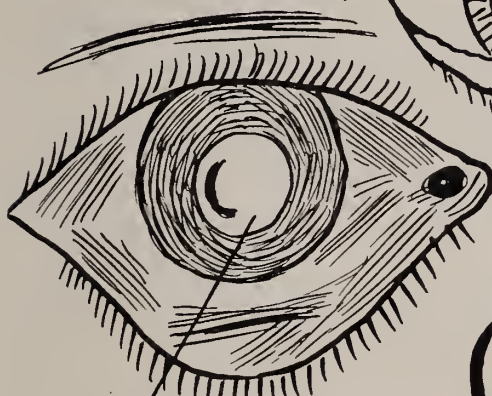
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Shield to Protect Eye



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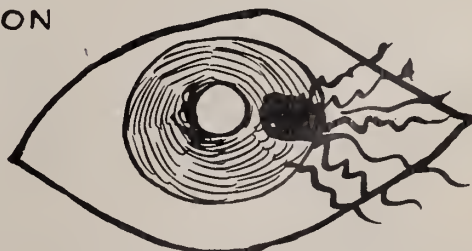


LEUCOMA.

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spring it is infectious and contagious and due to a special bacillus and attacks about all the members of a family, school or community and known as vernal and autumnal ophthalmic catarrh or conjunctivitis.

OPHTHALMIA NEONATORUM.

Having given a brief resume of the various ophthalmias as a leader to the general practitioner; further light will now be focused on the subject of ophthalmia neonatorum, or specific inflammation of the eyes of the newborn babe, due to "sowing wild oats" on the part of the husband, mother or attendant nurse, and may be confounded with acute croupous ophthalmia; the latter begins with swelling of the lids which are soft, pliant and not painful to touch; the deposit is a croupous, false membrane, rather translucent, composed of coagulated fibrin upon the retrotarsal folds, coating the inner surfaces of lids, but not involving the bulbar conjunctiva; the deposit is easily removed and shows beneath a granular, bleeding surface; the cornea, except in severe cases, is not involved. Healing takes place in ten to thirty days; except where the croupous membrane reforms again and again, and the disease may last for months.

Diphtheritic ophthalmia is differentiated from ophthalmia neonatorum by the broad-like, painful, infiltrated swelling of lids, a scanty sero-purulent or sanious discharge and exudation or infiltration of the layers of the conjunctiva which leads to coagulation necrosis,—molecular death of the tissue involved and by spreading to the ocular conjunctiva and by infection, pressure and strangulation destroys the nutrition of the cornea.

Diphtheritic ophthalmia is seen during epidemics of diphtheria, and rarely occurs with ophthalmia neonatorum, and is commonest between the ages of two and eight years and is rare in young infants. In certain localities in the South of France and North of Germany diphtheritic ophthalmia is common and in large cities, but, rather infrequent in England and America. Its symptoms are the discrete and confluent form; the lids are swollen with peculiar hard, painful board-like induration; the membrane is a dull ashy, grayish appearance, is torn with difficulty; if the infiltration is deep the subjacent structure is pale, and when cut into may be anaemic and lardaceous. If the diphtheritic inflammation has attacked a purulent conjunctivitis, the profuse secretion is checked and becomes sanious and irritating. The cornea sloughs in severe cases with great rapidity and destruction of cornea may occur in twenty-four hours. Constitutional manifestations are fever, with restlessness, de-

rangements of stomach and bowels and kidneys.

Purulent Ophthalmia.—Acute blennorrhoea of the conjunctiva.—Comes in one of two forms: 1st, in the newborn babe it is called ophthalmia neonatorum; 2nd, in the adult it is called gonorrheal ophthalmia.

The conjunctival inflammation in ophthalmia neonatorum, has redness of the mucosa which rapidly swells, infiltrates, serous infiltration of the bulbar conjunctiva and free secretion of contagious pus, the infection coming from the genito-urinary tract of mother or attendant or nurse, at birth or shortly after. All severe forms have present the gonococcus of Neisser, possibly the infection may occur *in utero* from the virulence and high penetrating power of the above gonococcus.

There is a severe type of this disease with the presence of the germ or germs of Neisser, which increase in number and severity and quickly invade the cornea, in addition to the gonococci there is present the staphylococci, streptococci, diplococci or pneumococci. Careless bathing of child after birth, filthy hands, towels, cloths, a gonorrheal nurse, filthy sponges, filthy lochia, purulent inflammation of the umbilicus are prominent causes of ophthalmia neonatorum. Inoculation with healthy lochia does not produce the disease.

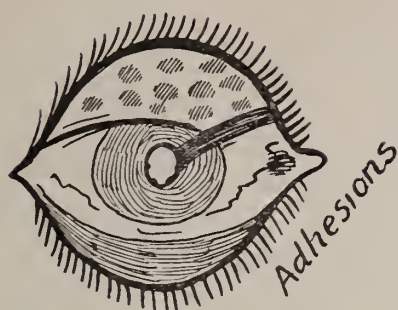
The mother may by trying to treat the navel contaminate her fingers and transmit the purulent inflammation to the eyes of the babe. At the Preston Retreat, Philadelphia, when Dr. Joseph Price was the obstetrician and surgeon in charge for several years, there was a special room for the nurses to take the babies to arrange their toilet and give proper antiseptic dressings to the umbilicus. No mother was allowed to do this, the strictest asepsis and antisepsis was used in preparing the mother's genitalia, bed, clothing and room for the ordeal of labor, and so should the same rigid rules be demanded in every home, it would prevent ophthalmia neonatorum and all other complications.

Authorities state infection is more prone to occur in face presentations and in prolonged labors.

More boy babies have ophthalmia neonatorum than girls, and it is more common in hot countries during the spring and fall, and occurs most often in cold countries in the summer.

The time of appearance of this disease is in from two to four days, it may occur in twelve hours after inoculation, or delay longer when infection occurs from the genitalia, infected fingers, towels, sponges or nurse. One eye or both, may be involved simultaneously; if one eye, the other may be antisepticised with a one or two percent. solu-

77



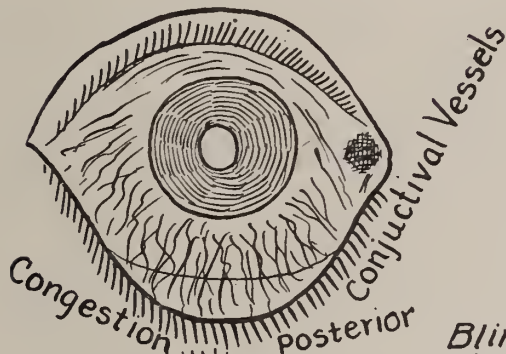
SYMBLEPHARON

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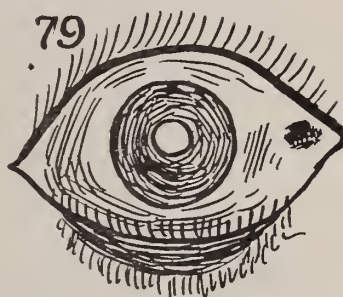


ECTROPI ON UPPER LID

80



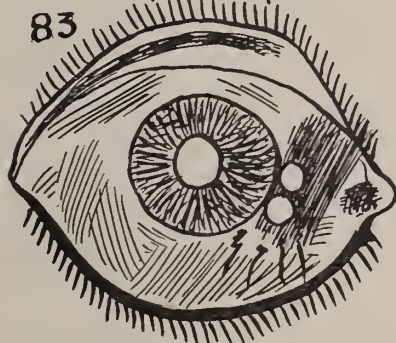
79



ENTROPI ON LOWER LID

70% of
Blindness in general
due to Trachoma,
then
Measles, Scarlet Fever
Small Pox and
Diphtheria

83



PHLYCTENULA OPHTHALMIA

86



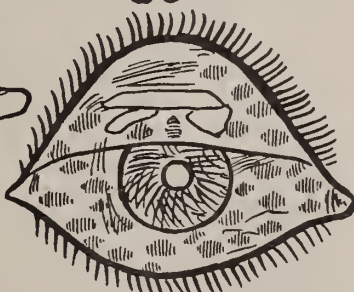
PANNUS

84



EXUBERANT
GRANULATIONS
OF LIDS

85



GRANULAR LID

90



COMPLETE STAPHYLOMA
OF CORNEA

tion nitrate of silver and shielded and prevent its becoming infected.

Symptomatology—The symptoms are redness of mucosa with rapid swelling of the mucosa and lid, pain, heat, tenesmus of lids, redness, tenderness of conjunctiva with chemosis, cushion-like lids, upper lids overhang the lower ones, the muco-purulent discharge becomes more purulent, changes from a turbulant to a yellow or greenish-yellow pus, and in profuse amount.

The first forty-eight hours the palpebral conjunctiva is red, velvety, swelling is great, the eye-ball greatly infected, upon surface of the mucosa are great flakes easily removed, the mucosa now becomes irregular, rough, dark red color. Spots of ecchymosis occur; the surface bleeds easily.

The ocular conjunctiva is infiltrated, the chemosis forming a hard ring around the sclera-corneal junction; the cornea in a pit-like crater at the bottom of the chemosed ring, the discharge gets more profuse, acrid and virulent, stored in the *cul de sac*, or runs out from under the overhanging upper lids onto the cheek and face, and often cause great irritation and dermatitis; the lids now relax, much tension has been reduced, and can be everted; the mucosa is puckered into folds, and papilla-like elevations and discharge contain blood and serum; the palpebral conjunctiva is relaxed, thick, granular, the bulbar portion is also thickened and may have cicatrices that are lasting. To preserve the cornea and sight is the great desideratum.

From the virulent inflammation and discharge tension, heat, swelling and pressure, the cornea may be involved, it loses its lustre and polish, gets dull and hazy within the first two or three days at one or more points, necrosis with exfoliation of conjunctival layer and the anterior layer of the cornea with or without ulceration of one or several points or entire surface of cornea takes place, and the cornea may become perforated with resulting iritis and anterior synechia. In mild cases the cornea escapes injury, the changes which occur in the cornea are due to tension and strangulation of tissue or nutrient vessels by swelling of tissues involved and also, from infection by the viscous discharge.

As has been said, the mild cases recover under proper treatment. If a corneal ulcer forms and the inflammation subsides the ulcer heals by regeneration of corneal tissue and leave a cicatrix or nebula; but, if the ulcer is central and perforation occurs, the aqueous humor escapes, the lense passes forward against the posterior surface of cornea and the opening closes with lymph, the lense returns to normal position carrying a mass of

lymph upon the anterior capsule forming a pyramidal cataract; a peripheral ulcer with perforation forms adhesions with the iris to the aperture, and is held by the inflammatory exudate, the adhesions form on the posterior surface of cornea or in the cicatrix producing a dense white scar called adhesive leucoma. If the corneal tissues and cicatrix are weak, unable to resist the intra-ocular pressure stretching of the tissues result, elongation of cornea causing anterior staphyloma; and copious sloughing of corneal tissue with escape of aqueous and prolapse of iris, together with the products of inflammation form total anterior staphyloma; the inflammation may be so great as to involve the ciliary body and choroid, cause panophthalmitis with gradual shrinking of the globe with atrophy of the bulb; the dense nebulous condition of the cornea or opacity may end in perforation or end in recovery and become perfectly clear.

The conjunctival surface may show a flocculent state, covered with flakes of lymph or have a grayish or ashy appearance resembling diphtheritic conjunctivitis, during coalescence.

Synovitis of the knee-joints, wrists or elbow may take place in ophthalmia neonatorum manifesting the same complications as in adults during a gonorrhoea. Mayes states, that mild catarrhal ophthalmias, hyperemias present the appearance of a granular rather than a purulent conjunctivitis, which may continue for weeks with danger of corneal disease.

Some babies have a non-specific hyperaemia of conjunctiva for a few days after birth due to uncleanness, light, irritating soapy water or change of temperature that readily get well with proper hygienic measures. The State Board of Health of Kentucky and the legislature did a wise and most humane act when a law was made requiring all obstetricians and midwives to instill into the eyes of the newborn babe at once a 1 percent. solution of nitrate of silver, dose drops three into each eye. Let every one who practices the sacred art of midwifery be in a state of preparedness armed with an ounce of prevention; viz. solution of nitrate of silver and save the 75 percent of blindness due to this horrible and calamitous disease, that blights life, happiness, home and country. If we do our duty there will be little or no use for the state blind asylum. All praise is due the gifted angelic Loreli, chairman of the Legislative Committee on Blindness for her devotion, assiduity and heroic endeavors in behalf of humanity and the law recently passed by the legislature. Yea, three long, loud, prolonged

cheers for this dear angelic Loreli, Miss Lindy B. Neville.

In towns or cities the health officer must be notified within twelve hours of the occurrence of a case of ophthalmia neonatorum and within 24 hours when a case develops in the country. For failure to do so the fine is great.

For the proper treatment of ophthalmia neonatorum, 1st, prevent it; 2nd, if you are not competent to treat the case, turn it over to the health officer at once; 3rd, get Prof. George E. de Schweintz' book on diseases of the eye, and study the ophthalmias earnestly and assiduously and intelligently master them; it is your duty as a general practitioner to do so; 4th, then study and master specifically ophthalmia neonatorum; 5th, if you have the money, go and take a general practitioner's post graduate course on the eye, and be a wiser physician, a better doctor and a noble humanitarian.

We mention no treatment in this article except de Schweintz' "Book on Diseases of the Eye," it will act as a compass and family Bible, be a lamp unto your feet, and a light unto your professional pathway.

Some reader may ask why not give the treatment *per se*? The answer is this, every case is a law unto itself. Bring me your case, then we will see what the indications are to be met. Every case of recovery and retained vision after ophthalmia neonatorum and trachoma, as a rule, have some error of vision in the vertical or horizontal curves or meridians of the cornea that have to be corrected with properly prescribed glasses as time goes on.

Granular Ophthalmia.—Granular conjunctivitis, trachoma, Egyptian ophthalmia, (military ophthalmia).

Trachoma is an inflammation of the conjunctiva, the mucosa is rough, irregular, has lost its smooth surface from the formation of granulation tissue, rounded granulations which, after absorption, leave cicatricial changes. In trachoma we have the pathologic conditions of hypertrophy, hyperplasia of mucosa, atrophy with absorption, a cirrhosis of conjunctival mucosa with contraction of the latter and lids, shortening of canthus. We have acute, chronic and sub-acute trachoma. The acute trachoma may exist as an independent disease, but is generally due to an acute inflammation engrafted upon the chronic form.

The causes of trachoma are, bad hygienic surroundings, occurring in homes, schools, camps, houses of reform, where people are too closely crowded, or often come in close personal contact, using the same pan and towel to wash and wipe with, using the same bed or implements to work with, or for games and

pleasure, improperly ventilated houses, impaired nutrition, poverty, lacking the necessary things to live sanitarily, hygienically and discreetly and a woeful amount of ignorance; being unable to comprehend how to live on preventive lines.

Chronic granulations may develop from an acute case but, too often is the primary disease.

Some people are predisposed to chronic granular ophthalmia, the subjects are pale, anaemic and underfed; even races, the Jews, Irish, inhabitants of the East, and the Indians of North America, are predisposed to trachoma, the negroes are said to be exempt, but some of the typical cases of trachoma have been seen by the writer in negroes.

Damp, low, heavy, atmosphere is said to be a predisposing cause, and that at an altitude of 1,000 feet confers an immunity from trachoma.

No doubt this disease is due to a coccus or micro-organism.

Most of the cases of trachoma seen by the essayist have been on the bottom lands of Dix River, Green River, and the Cumberland River, and in the valleys of the mountains of Eastern Kentucky, in the counties of Rockcastle, Laurel, Clay, Jackson, Whitley, Bell, Knox, Pulaski, Wayne, Clinton, Russell and Adair: localities of low altitude.

Trachoma is specific in that it produces from the discharge of the diseased eye not only a purulent ophthalmia, but a disease like the one from which it came.

The chief characteristic of the disease is the granulations, by some called follicular ophthalmia and papillary hypertrophy of the conjunctiva.

Follicular conjunctivitis is marked by the tumefied lymphatic follicles and trachoma by the development of trachomatous nodules, which must be looked upon as new formations.

Papillary trachoma, the trachoma bodies, or follicles, are few in number and hidden from view by the hypertrophied conjunctival papillae, often called chronic trachoma.

In follicular trachoma, the presence of the follicles is the marked feature.

Mixed trachoma, in which the follicles lie among the hypertrophied and inflamed papillae but not hidden by them—diffuse trachoma.

In acute trachoma the lids are swollen, conjunctiva red, the papillae hypertrophied; between them are found non-vascular roundish bodies, granulations, photophobia is intense, blepharo-spasm, hot scalding tears. The bulbar conjunctiva is red, injected, vessels over-filled, elongated and some times tortuous. Superficial vascularity of the

cornea appears and ulceration of margin of cornea may take place; pain in temple and orbital region, discharge slight at first, a profuse muco-purulent later, ending in a purulent one. Termination by resolution, or ends in the chronic form. The sub-acute form of trachoma is the above pathology manifested upon the chronic variety.

The chronic trachoma shows up by a feeling of sand in eyes, first on lower lid in the form of grayish-white, semi-transparent bodies which vary in size according to age and irritation, and have been named "sago grain," are outlined in parallel rows, are confined to palpebral mucosa and upper retrotarsal folds, and sometimes are found on the caruncle and semi-lunar folds; the mucous membrane is pale, yellowish, rough, uneven, and contains trachoma bodies or follicles which have more or less deep situation, and fill up the tissue after only enough secretion to glue the lids; later the compressed masses choke the mucosa and its vascular supply and superficial vascularity of cornea results; later, vascularity is increased; follicles get larger, soften, infiltrations increase and with the enlarged conjunctival papillae, red protuberances, mixed and papillary granulations result; then the irritation is greater, muco-purulent or purulent discharge is abundant, more tenderness, pain and photophobia and corneal complications; from time to time, softening and degeneration of the granulations take place and new crop of eruptions occur; eventually cicatrization begins and gray-white lines or scars appear intersecting the beds of old granulations; these cicatrices lie parallel to the ciliary borders of the lids. From the gradual process of cicatrization of the old granulations and new crop forming a chronic diffuse induration, hyperplasia of the mucosa results with formation of scar tissue, with atrophy of the mucosa and contraction of same; deformity of the lids, narrowing and shortening of the palpebral fissure; a fibroid induration of the mucosa affects all portions and the sulcus has a tendency to become obliterated—the lining seems to dry up and assume a state of xerosis. Sequellae of trachoma are trichiasis, distichiasis, entropion, shrinking of the conjunctiva from pathologic changes, cloudiness and ulceration of cornea and pannus.

Pannus is considered a form of vascular keratitis—begins under the upper lid but may affect the entire cornea and is due to formation of superficial blood vessel tissue continuous with the vessels of the conjunctiva; if softening and ulceration occur the cornea becomes involved; otherwise not.

Under the old medical treatment of local applications, the treatment was painful,

long, tedious and unsatisfactory to both patient, family and practitioner; but now under modern aseptic and antiseptic methods, most of the patients should recover from trachoma even where there are corneal complications.

Acute trachoma should be, as should sub-acute trachoma, treated as an acute inflammatory infectious disease, with rest, hot or cold applications locally applied, soothing antiseptic medication "*pro re nata*", thorough cleansing of the eye, leeching or cupping to temple, destroying all discharges and soiled dressings by fire and boiling water and protect sound eye with a glass shield.

Treatment of chronic trachoma is surgical at least this has been the best and most successful with the writer. The Grattage operation has given entire satisfaction and is preferred and with the proper instrumentation according to Prof. L. Webster Fox is not only successful but ideal surgery—many months after the operation of grattage, sometimes a canthoplasty has to be done to lengthen the lids and remove tension, but this latter operation is a small affair under cocaine anaesthesia. The Knapp roller forceps operation has given the best of results in many cases, but will have more failures than the grattage: too often the Knapp operation is not done thoroughly, forcibly and heroically, so to speak. Care must be taken to avoid injury to the caruncle, semi-lunar folds, the punctae and canaliculi and saque. Roll the lids north, south, east and west, diagonally, conversely and perversely—gently, but forcibly, lacerating the mucosa, squeezing out the granulations, breaking up adhesions of mucosa, elongating and widening the lids by forcible stretching, under antiseptic precautions, and the lids and corneal complications heal quickly in my hands.

The essayist would most respectfully ask the reader to not confound keratitis, keratoiritis and iritis with acute or sub-acute glaucoma. Atropine sulphate is a great medicine in the treatment of iritis and keratitis, but a dangerous remedy in glaucoma.

Too often has a glaucomatous eye, been taken for a conjunctivitis, with malarial neuralgia, cold, bilious attack, or migraine and atropia sulphate instilled and the eye lost; when, if eserine sulphate gr. 1-8 or 1-4 to distilled water $\text{z}\bar{\text{i}}$; dose drops 1 to iii every 5 or 6 hours had been used to contract pupil with other local hygienic and dietetic and constitutional treatment, an eye would have been saved.

Pilocarpine also contracts the pupil and it or eserine is used when there is peripheral ulcer of the cornea to contract pupil when perforation is threatened and prevent pro-

lapse of iris, or kerato-iritis. Atropia sulphate, 1 per cent. solution, is used to dilate pupil, retract iris, and promote prolapse of iris should perforation of corneal ulcer occur.

Operations for deformed lids, shortening, entropion, ectropion, trichiasis and distichiasis have been satisfactory and where the lids are shortened, or narrowed, I have often done a canthoplasty then dissected the mucosa in its atrophied state from the cartilage for a fourth of an inch, stretched the lids then made incisions through the margins of the entire lids, 1-4 inch long, and 1-4 inch apart, and had satisfactory functional and cosmetic effect. The essayist has been doing the treatment for trachoma both medical and surgical, since 1877, and has had the joy and pleasure of saving the sight of many eyes, removing pathology, and connecting deformities and feels and knows he has been a benefactor to the afflicted in trachoma and its complications, as well as in other lines of ophthalmology. As a rule all trachomatous patients where the cornea has been infected have errors of refraction that should be corrected by proper glasses.

SURGICAL INFECTIONS OF THE JAW.*

By C. B. SPALDING, Louisville.

Under the caption of "Surgical Infections of the Jaw," there is room for quite a diversity of pathology, both as to character and location; and it is my idea, to cover the subject in part, only, with such deviations as may seem of interest, relying upon a discussion to bring out in full each detail.

No one portion of anatomy can be found which is lacking in interesting features; some perhaps less than others, yet none of them seem even possible of improvement. Certainly, the superior and inferior maxilla, situated as they are; the lower jaw a fulcrum working against a fixed point, the upper jaw; as a control of the intake of the alimentary canal; the fixed surface for muscular attachments, which have to do with eating, talking, breathing; the foundations for the teeth, the support of the tongue, the container of air spaces; communicating with the breathing apparatus; and many features too numerous to mention; do not lack of interest.

In brief, the inferior maxilla, besides its numerous muscular attachments, and periosteal covering, has on its buccal surface, a mucous membrane covering, blending with the periosteum; and these structures dipping into the alveoli as the periodontal membrane, which not only covers the root of the tooth,

but lines the socket. The nerve supply of the teeth coming in through bony canals, originate from second and third division of fifth nerve, with branches from palatal, lingual and buccal nerves. The superior maxilla is similar in character of covering, but contains the antrum, which communicates with the nose, and lies directly under the eye socket.

The temporomandibular joint must not be overlooked, as it has its interests, ankylosis, dislocation, and fracture, being prominent among them.

The lymphatics, which drain these areas are of great importance. The submental lymph nodes lie in the anterior part of the digastric triangle, just under the chin, and may become enlarged when there is an infection about the middle section of the gums of the lower jaw. They communicate with the sub-maxillary nodes, and so on, drain to the nodes about the internal jugular vein. In turn they discharge into the deep cervical nodes about the carotid bifurcation. The retropharyngeal glands situated behind the nasopharynx, drain the nasal cavities and air sinuses, and run down into deep cervical glands. Such is about the mode of lymph drainage, yet when one channel is blocked another will open and try to care for the drainage, as all nodes communicate.

With this gross review of the anatomy; bearing in mind an always present breeding ground for bacteria, in the buccal spaces; about the teeth, as well as in the air passages and about the tonsils; two things remain to produce our "Surgical Infections of the Jaw"—an avenue of entrance and a lowered resistance, or inactivity of the phagocytes, sufficient to allow the bacteria to invade.

The inflammatory processes here associated with any kind of irritation, such as; mechanical, toxic, thermal, or whatever it may be, are the same as in other regions. There is the usual blood vessel dilatation, increased blood supply, then a slowing of the blood stream, agglutination of white cells to the vessel wall, and a pouring out of white cells into the tissue, with a proliferation of some of the tissue cells. Many of the white cells have the power of destroying the infecting bacteria, and they are aided by the connective tissue cells, which are even more effective; and as the demand is created, nature tries to increase the number of polymorphonuclear white cells, to aid in the fight of resistance.

Blair divides the inflammations into acute, chronic and sub-acute, but says a "rigid distinction should be made between the inflammation and the irritant that caused it."

The process is a protective one and not to

*Read before the Jefferson County Medical Society.

be looked upon as other than an evidence of resistance.

"An infection is the invasion and growth of some kind of a minute organism, that feeds upon and poisons the living tissue."

There are many varieties of infectious bacteria; some of them living constantly in the approaches to the alimentary canal, and respiratory organs, while others have frequent opportunities for invading these areas. Some of them, upon gaining an entrance into the tissue, are more prone to pus formation; such as the staphylococcus and streptococcus pyogenes; because of their virulence, and the lack of resistance of the individual tissue. Yet many inflammatory processes are cut short of pus formation by reason of the reverse of these conditions.

It may be well to mention some of the ave-



Original dissection by C. B. Spalding

nues of entrance of bacteria. Any mechanical abrasion of a tooth, not cared for and allowed to gradually become the so-called decayed tooth, is an excellent avenue for invading bacteria.

Loosened teeth in their sockets, whether by accident or intent admit of a fresh breeding ground for bacteria and possible invasion; as is also the case in an unattended fractured tooth, or alveolar process. Fractures of the jaw, which are nearly always compound, from the lack of resiliency of the muco-periosteal covering of the jaw bones; nearly all become

infected and require most constant and cautious attention to procure union without damaging suppuration. Should the fracture occur in the upper maxilla and communicate with the antrum or nasal fossa, we may have the added disagreeable condition of emphysema to contend with.

However, Blair says, "Most of the infections of the jaw bones are extensions of infection from the teeth or pericementum. In a comparatively few cases an infection of the mucous membrane extends directly to the surface periosteum and then to the bone substance, but metastatic infection of the bones themselves, is rather rare; and we have seen but one case of acute metastatic septic osteomyelitis of the jaw bones."

Dental caries generally extend toward the pulp of the tooth, and when this is exposed, infection follows, and the pus easily extends to the root canals. If not interfered with, the pus will pass out through the alveolar process, through the canal of the root and present alongside the root. This focus of infection may present in the form of the so-called gum-boil, or it may dissect up varied amounts of periosteum, with resulting necrosis of bone. Such injuries requiring simple surgery as in the case of the gum boil; or extensive dissection and removal of necrosed bone with long slow repair, and an ugly resultant scar, where bone has been destroyed. There may be a kindly effort on the part of Nature to produce an alveolar fistula, the pus burrowing directly through the bone, and soft parts, and evacuating itself through a skin sinus, with little bone destruction. The pain is not severe, but an ugly retracted scar results, and a cure cannot be expected, until the offending tooth has been removed.

Osteitis may be caused by mineral irritants, septic infection, specific infection or trauma, and the process of inflammation is about as in other tissues, except that the pressure is greater and loss of tissue may be extensive. Some of the specific infections of bone which cause great destruction, are syphilis, tuberculosis, and the so-called post-febrile osteitis.

The maxillary sinus comes in for its part in inflammatory processes, not infrequently; either from the nose, or peridental extension; and presents all the phenomena presented in other infectious reactions. The essential treatment of which, consists in drainage.

Any of the infections mentioned here may involve the temporomandibular joint, or the joint may be destroyed by metastatic septic arthritis of any form, leaving a unilateral or bilateral ankylosis; which calls for very efficient plastic surgery.

It would hardly seem proper to proceed

further with this subject, without mentioning some of the types and characteristics of the tumors to be found in this area; because of the little we understand of the cause of tumor formation, both benign and malignant, as well as the probabilities of such conditions follow-



Original Dissection by C. B. Spalding

ing in the wake of prolonged infection and irritations.

Most of the benign as well as the malignant types that invade other parts of the body are to be found and dealt with. Blair treats with them as follows: Mucous cysts; from distended mucous follicles; Lipomas, angiomas and cirroid aneurysms are rare. Personally I have seen one angioma involving the jaw, the tongue, one tonsil, and part of the pharynx. There seems little to do for them. Fibroma may develop from periosteum or the fibrous tissues inside the bone, and may in the last condition go on to expansion and bone perforation.

An osteoma is characterized by bone surrounded by a layer of cartilage, and occurs most often in the upper jaw.

Myxosarcoma is not infrequent and should be completely excised as early as possible. Odontomas are benign tumors and originate from the growing tooth germ. Dentiginous cysts are found in varying sizes, connected with the root of a dead tooth, and may be small or attain the size of an egg; and an epi-

thelial lining has been demonstrated in them. They are suspicious of more extensive involvement, though considered inflammatory.

Sarcoma may involve any of the tissues, and it is well recognized that malignancy offers little for prognosis; but should be removed as nearly in its entirety as possible, if seen early enough.

Endotheliomas may spring from alveolar processes and are considered very malignant. Carcinomas may be found wherever ciliated epithelium exists, and may involve the jaw bones by extension, and require removal along with the involved soft parts.

With the above summary of the facts to be dealt with in the treatment of conditions in and about the jaw it seems to me that for practical purposes, the infections may be divided into two classes; infections that involve the soft structures only, and infections which primarily attack the bone.

Ordinarily infections of the soft parts enter the tissue through an abrasion of the mucous membrane or the skin; except perhaps in those rare conditions, such as an infected parotid gland, originating through transmis-



Original Dissection by C. B. Spalding

sion of bacteria by blood or lymph stream from some remote focus.

Upon the type of bacteria, largely depends the process of treatment. Any rapid pus formation in the soft areas, with no bone involvement, and the abscess may be extensive and approach very close the periosteum, yields

very kindly to free incision and drainage. Free drainage is meant literally, no pockets should be overlooked. From a cosmetic standpoint, it is well to attempt drainage through the mouth, that no unsightly scars may be left. Yet if perfect drainage cannot be attained, a skin opening should be made at the best point of vantage, rather than submit the patient to a long infection with pus burrowing along the fascial planes, and pointing in numerous places, perhaps involving the numerous lymph glands, and making an extensive affair of a simple one, properly handled.

The types of bacteria which cause extensive inflammatory reaction and are slow at pus formation, probably offer greater difficulties for the operators. Just where to drain, and when it may be done most effectively, is a large problem. Free incision, without a fixed focus for drainage offers little except relief



Original Dissection by C. B. Spalding

of tension, and may in turn be the source of receiving an overwhelming dose of poison through the raw surfaces exposed. So it seems that we must resort to hot wet packs, and the usual constitutional treatments, to await the production of a focus. At all times keeping well cleaned the buccal outlet, that the intake of bacteria may be limited.

In these cases, I have found the autogenous vaccines very efficient after it was possible to procure a culture. Such a case occurs to me now that caused no end of worry, besides a

long tedious suppuration, which might well illustrate the type. A Mrs. X., consulted her dentist in one of the towns out of the state, suffering with a thick inflammatory involvement inside the mouth, about the angle of the lower jaw on the left side, extending back to the left tonsil. The dentist located no dental trouble, so sent her home, where she consulted a physician, and went to a throat specialist, who feared a possible peri-tonsillar abscess; and incised the tissue about the tonsil, getting only blood; he then sent her to a dentist, and X-ray pictures were made which indistinctly suggested possible damage to the peri-dental tissue. A few days elapsed, and I was consulted and agreed with the dentist, and opened freely the gum along the outer side of the lower teeth, but got no pus. However the whole side of the face was greatly swollen and hard at this time, and I was able to evacuate two or three drams of pus through an incision in the mouth alongside the upper teeth. The focus was then thought to be found, and, though the tonsil and whole side of the face and neck were swollen and hard, a rapid recovery was expected, assisted by the use of hot applications and vaccines. She insisted on going home, and soon reported great relief, except for the hard swollen spot at the angle of the jaw, which persisted until she finally returned here, about three weeks later, and a skin incision was made at the angle of the jaw, draining a small pus cavity which extended down to the periosteum. In the meantime, two teeth had been extracted which were suspicious. Following this last drainage she recovered; the whole infection covering a period of about four months. And I may add that there seems no way, that might have lessened the extension or trauma.

Two conditions which must be borne in mind, and demand early diagnosis and free incision if results are to be obtained, are; Noma, a gangrenous condition found in children, in the wake of some infectious disease, which demands cauterization and free incision to relieve the tension, if we would prevent extensive slough; and Ludwig's angina, an infection involving the throat and floor of the mouth, and perhaps extending to the upper cheek; hard and planklike in character, and extending so rapidly that necrosis from pressure may appear before pus formation. Mortality of 40 per cent commands our respect, and as early and free incision seems to offer most, no time should be lost.

That more difficult class of infections, which invade the bone primarily at this site, practically always originate from within the bone, through the tooth socket; or find their way into the bone through the lymph or

blood stream. Any of the many bacteria inhabiting the mouth may cause bone necrosis, once they have gained an entrance into the bone, and there begin to multiply; the tension is high, and no room for swelling in the bone may be found, so the blood supply is soon interfered with, and necrosis results in varying degree; and demands free drainage and removal of dead and diseased bone, with proper treatment of the offending tooth and its socket.

The other forms of bone involvement by lymph and blood transmission are most frequently syphilitic, tubercular, malignant, or metastatic, and the operator must bear in mind not only the local, but remote infection if he would treat them successfully as a local condition.

Actinomycosis should not be left out of our calculations; while it is a rare disease, yet its presence is handled with great difficulty. It is due to the ray fungus, and does not ordinarily involve the bone, but may do so. The fungus is found in grain, and may get into the mouths of individuals handling such produce. It gets its entrance often through decayed teeth, and forms small nodules, which develop quite slowly, and finally break down and form sinuses, discharging a fluid containing the fungus.

The nodules and sinuses should be curetted away, and large doses of potassium iodid given, along with the Bevan copper sulphate treatment.

In conclusion, I might say that a tremendous field has been allotted to me in this symposium, and while it is impossible to cover all of it, even in part, in any reasonable length of time; I hope that the resume and dissection I propose to show will be of sufficient interest to elicit discussion and develop the various phases mentioned.

Walking Casts.—Kohler and Gerson give illustrated descriptions of inexpensive plaster splints and casts, with strip-iron stirrups, which allow the patients to be up and about. Gerson's cast not only immobilizes but exerts adjustable extension. This is realized when the patient is sitting or standing by overalls fastened to the stirrup and held up by suspenders. The pressure from the overalls on the stirrup and thus on the cast is ample to hold the cast in place and thus keep up the extension for a fractured femur, for instance. The pelvis and hip are not included in the cast; it fits against the tuberosity of the ischium. The cast can be cautiously pulled off at any time for inspection and massage of the limb, and the foot can be massaged and exercised without disturbing the apparatus.

DIFFERENTIAL DIAGNOSIS BETWEEN CHRONIC CHOLECYSTITIS, DUODENAL ULCER, AND SIMULATING NEUROSES.*

By M. CASPER, Louisville.

Anything that tends to clear up the possible complex pathology of the right upper quadrant should be always welcome on the floor of a scientific medical society. The subject should appeal to the medical men equally as much as the surgeon, for after all it is the clever medical diagnostician who first makes the differentiation. He certainly gets first chance to differentiate rightly in these intricate syndromes. In defining chronic cholecystitis, let us be sure we do it properly. There are several varieties and degrees of cholecystitis. Let us further understand that biliary calculi may or may not coexist and are not *per se*, the pathology. In fact, the simple cases of cholecystitis, before stone formation, are the hardest to differentiate from simulating neuroses of this region.

And also in chronic duodenal ulcer, we have many locations for ulcers, many kinds of ulcers, single, multiple, and complicated. Likewise, let us understand, if we may, just what the indefinite term neurosis, means to imply in this region.

First, let us separate a large and diverse class of reflex conditions and functional disturbances that are not properly to be classed as neuroses. For example, we have a class of functional disturbances of the pyloric orifice, spasm of the pylorus, due to an abnormal or diseases appendix, or other parts of the intestinal canal. This of course, is tangible pathology and not of nerve origin.

We would like to interpolate here that the more accurate we become in diagnosis the fewer cases relatively we find of neuroses of this region. And if we look elsewhere, we are often able to remove this or that particular neurosis by remedying a remote causative condition. Neurosis means disease of the nerves, a rather obscure and indefinite term, as is the condition itself often times. We have in this region, nerves of a very intricate arrangement and there is much yet to clear up regarding the innervation of this region. The stomach and intestines are a part of the autonomic system, of which the eye, throat, lungs, abdominal viscera and genital organs form a part. This explains why disturbances of an eye or other parts of this autonomic system may manifest itself in the stomach or other organ, entering into this complex system.

*Read before the Jefferson County Medical Society.

The importance of a differentiation of these conditions is to be emphasized; for, first, if we mistake a neurosis for organic disease of abdominal structures and operate, we do that patient a distinct and irreparable injury, for does not every surgeon know too well, that even an exploratory operation on the neurasthenic renders him or her more miserable? Nuzum and others have recently called attention to the number of operations mischievously performed on tabetics with gastric crises. The number operated on in Cook County Hospital is given as 8.7 per cent in 1,000 cases of tabetics. Most of them for gastric ulcer and gall bladder disease, and some of these patients have had multiple operations by different surgeons and this happens through failure to properly interrogate the condition of the nervous system.

Secondarily, if we err the other way and overlook organic disease, classing it as neurasthenia, we may thus erringly deprive a patient of proper surgical relief and with many and obvious possible complications.

Third, we have known inactive gall stones, on account of the constant gnawing and piercing pain after meals, to have been erroneously interpreted and for a long time treated for ulcer of the stomach, according to Rovsing, with long and strenuous dieting, etc.

Fourth, in case of ulcer, or cholecystitis, and patient desires postponement of operation (an ill-advised program), it is nevertheless of vast importance for his welfare to know the difference. For if patient has a perforation (about 50 per cent of chance), in case of ulcer, the necessity of immediate recognition is all too obvious. He may wait a day in gall stone colic (we won't say with safety) while hours are extremely precious in perforated ulcer. In case blood vessel is perforated, even quick action may not avail in saving patient and he dies, being labeled usually in such cases so-called "acute indigestion."

So the object of this paper is to "get right" in diagnosis and then go ahead. We'll classify our diagnostic heads as follows:

First, Anamnesis.

Second, Physical examination.

Third, Radiography.

The history of a case is always important, but in this class it is doubly so, for the history often tells the tale. Much depends upon the manner of taking the history. Neurotics are often indefinite in their histories, no two alike, and in fact the same individual's history today will be so different from yesterday's, that it is scarcely recognizable. And this is of greatest importance in making a differential diagnosis. The even tell-tale history of duodenal ulcer is most constant while gall blad-

der disease is characterized by irregularity. There is a distinct tendency in the nervous individuals to try to please the doctor in giving their histories, this tendency is often present in persons with organic disease, also, especially if they are of nervous temperament. So histories become more valuable not in themselves as much as in who "takes" them.

One point we want to dwell on a moment in this connection, is that a patient who has been afflicted for years with a mild cholecystitis or duodenal ulcer, (mild, because a severe case would probably have caused him to seek and procure relief without waiting so many years), along with overwork and other human burdens and cares makes this person appear to others, more or less neurasthenic. This combination must not be overlooked. Again neurotics acquire organic disease, and they are in especial need of proper treatment, this class must not be lost sight of. One of the worst apparent neurotics we have ever seen was a woman who had chronic appendicitis, cystic ovary, large uterine myomata, duodenal ulcer and chronic bronchitis. This unhappy person had been treated for nervousness by several doctors, of course without benefit. Proper surgical relief made a different person of her, for she gained 29 pounds in six months, and is able to do her daily work with cheer and comfort, though she still retains to her nervous temperament.

If surgeons explained to this class of patients, the probable continuation of these nervous symptoms, after recovery from operation, they would often save themselves unjust criticism. In obtaining the history of a nervous patient with a super-imposed organic disease, one can nearly always elicit a zone of change in the character of symptoms. These patients know they are nervous but say these pains are quite different. Pain to the patient is always the chief trouble and most of them can give a good account of the pain. Also pain is a most valuable sign in differentiating these conditions. Its value increases in proportion to the intelligence of patients and his powers of self scrutiny.

In early gall bladder disease, it may only be an uncomfortable sense of fullness, a distention or pushing up feeling, often accompanied by and relieved by belching. With this there may be a sourness or acidity described as heart burn. This acidity, however, is of no value in differentiating as it occurs in all three conditions under discussion. It is the early cases of cholecystitis that are overlooked, later we have increased pain, prone to occur suddenly at irregular intervals, often immediately after a full meal, it leaves as suddenly as it comes, followed by a period of soreness. Pain is usually felt under right

costal arch and transmitted to back and often towards shoulder blade. Especially if cystic duct is involved as pointed out by Murphy. It may and often does occur during the night or on sudden exertion, especially when case has advanced to stone formation. Then the pains and colic are much worse often requiring narcotic to get relief. Vomiting and nausea always accompany this violent pain and very often the pain is allayed by the vomiting.

We of course, have no such severe pain in neurosis nor in duodenal ulcer unless we have a perforation when it is a far different picture.

The pain of duodenal ulcer occurs from two to four hours after the meal, is gnawing or boring in character and is relieved by sodium bicarbonate and taking of food. It seldom occurs at night. These ulcers are distinctly more active in certain seasons of the year as in cold damp weather.

The pain in the neurotic is so variable, in degree, time, character, and location as to beggar any description. A trifling pain to the neurotic may be almost unbearable. Such conditions often baffle the skill of the most astute diagnostician.

Gall stones occur more often in women as does neuroses while duodenal ulcer is more common in men. This statistical observation has little real diagnostic significance.

This pain of the neurotic comes to-day before breakfast and lasts all day is sharp and constant, to-morrow it is entirely different.

Close questioning will often reveal a pain of like purport in some other part of the body, they are sure to have throat symptoms. Nearly all are troubled with "that lump in their throat." They have neuritis, palpitation of the heart, ovarian pain, etc.

All these classes of patients are constipated and all suffer more on account of this accompanying constipation. All have so-called indigestion and dyspepsia thanks to present day improved diagnostic methods, we can at least eliminate these two meaningless terms. Gas pains from partial intestinal obstruction often accompany and complicate these cases and necessarily cloud the diagnosis.

Physical Examination: A look into the faces of these patients is often of inestimable value. This sign can't be taught in text books or school but comes to the close observer by hard experience. There is a difference of complexion, of expression and general facial characteristics.

The nervous patient often has a normal complexion even "peachy" especially if young, when we see a nervous person with a

worn look on their face look for something else present underlying their nervousness.

Ulcer cases may show lack of nutrition and are of slowly changing countenance and anxious, piercing look.

In gall stone disease, the complexion is tinged with yellow around the lower eyelids. We don't mean jaundice, for jaundice is a misleading symptom, may occur in other conditions than cholecystitis as ulcer near ampulla, duodenitis, etc. Besides, it don't occur in cholecystitis until unfortunate complications have arisen.

Deaver says if patient is "fat, fair and forty" and belches gas beware of gall stones. We might by way of supplication, say after ruling out neurosis, for wind swallows often simulate real gall bladder or stomach disorders. Inspection of the abdomen tells you very little as a rule. Palpation is valuable always and is to be thorough. We always palpate every other part of abdomen first, reserving probable seat of trouble till the last. The neurotic in giving location of their pain, tries to cover the whole abdomen at once, is more or less sensitive all over with spasm of abdominal muscles. This spasm is different from the rigidity of the recti muscles which are actively on guard in inflammatory diseases.

This difference can often be demonstrated by holding patient in rapid conversation, diverting their voluntary muscle control. However given a neurotic who has been told they have gall stones or appendicitis and it is difficult sometimes to get full control of their voluntary muscles and this is the one that may mislead us. Rigidity of the right rectus is more or less always present in cholecystitis and may be emphasized by percussion, palpation. Pressure during inspiration midway between the costal cartilages and the umbilicus will quickly divulge a tender gall bladder which moves with respiration. A tap on palpating fingers at height of expiration causes patient to complain sharply. The rigidity in ulcer is less marked as a rule and the tender point is somewhat lower and nearer middle line. Chronic appendicitis which often co-exists will cloud the picture in any of these cases as will adhesions but here is where Radiography renders us valuable service. We still try retention test meals and Ewald's test meal but can glean very little information from them and we get all this information from radiography and more. Neurotic conditions are nearly always quickly revealed with the X-ray. Gall stones have been a sort of "bug bear" to the radiologist till within the past year or two when, with improved technique and more experience in plate reading, most Roentgenologists are pro-

gressively proclaiming a larger and larger percentage of correct diagnoses. Faster "monotonic" plates. multiple even a dozen radiograms, persistent, long and tedious studying of each by varying degrees of light, long training, deduction of the "negative" plate, close acquaintance with gall bladder shadows, etc., etc., all go to improve the number of positive diagnoses. Even more valuable is the X-ray in duodenal ulcer.

The chief roentgen signs of duodenal ulcer are gastric hyperperistalsis observed by aid of screen, and may be overlooked if depending on radiograms alone. Retention of the barium meal in stomach over six hours, filling of cavity of perforating ulcer, defects and deformity of cap, hour-glass or pouching of duodenum.

Gastric hypermobility with rapid free emptying of stomach is indicative of ulcer without stenosis.

Retention of barium in duodenum. Pressure tender points, also other radiographic signs, which we will attempt to demonstrate with a few slides.

THE OTHER FELLOW'S MISTAKES.*

By G. G. THORNTON, Lebanon

In as much as one of our members has recently read a paper reporting one of his own mistakes, it may not be inopportune for me to read one reporting some of the mistakes of others as I have seen them, in a period of over twenty-five years' experience.

I shall not report them all, nor the worst ones that I have seen.

Some of them have been harmless, some ludicrous, some ridiculous, some serious, some have reflected on a brother practitioner, some have reflected on the man who made them and many have served to bring discredit to our noble profession. In the very beginning of this paper I wish to say that it is not written in an hypocritical air, but has rather for its aim the effort to show forth mistakes that have been made by the competent, noble, good and otherwise, a plea that the broad mantle of charity be thrown around the failings of our brother in practice, by keeping before our minds the fact that what has happened to others may happen to us, not in exactly the same way, but in a way, that may cause us to crave and need their sympathy just the same.

The mistakes of the other fellow might extend beyond the profession and take in the nurse, or even the laity, but as you would naturally expect, I shall confine myself to the profession, as to do otherwise would neces-

sarily make the paper entirely too long, or make it too superficial.

Just here it may be well to say that not all the mistakes are made in diagnosis and treatment but many of the most troublesome ones are made in prognosis. It is especially in this latter that they stand out the most glaring to the laity and are often the most damaging to the profession, and sometimes the most damaging to other people who may stand in need of medical or surgical aid which when properly given might prolong life in health and strength. Neither in this last do our mistakes end. By impressing our patients too strongly with the seriousness of their condition, thereby taking from them that hope which is so necessary for a patient to have in order to make the best fight possible for life we may make an error, or by treating the condition with too much levity thereby leading the patient to regard the condition so lightly that life-giving measures may be neglected, a mistake may be made.

Another mistake, which possibly all of us are guilty of, is in allowing our patients to think that, by some occult power we can determine by feeling the pulse, looking at the tongue, listening to the lungs and heart, with a stethoscope, (often through several thicknesses of clothing, we can tell all about the mysteries of the liver, the digestion of the stomach, the condition of the nerves and the impurities of the blood—that we can tell whether the liver is "dead," malaria is in the system, the patient has grippe or typhoid fever, is threatened with pneumonia, has a deep cold that has settled on the lungs or bowels, that we can always right off the bat tell whether a patient has gall stones, appendicitis, renal colic or "womb disease." That there is some education needed along these lines I have no doubt you will all agree and the mistake that is made, so far as I can see, is that so many leave this for the other fellow to do whereas if all would do their part there would not be so much for any to do.

In extenuation for the mistakes that we see in others, I would make this plea; that he saw the case in the beginning when the symptoms were not fully developed, made up his mind as to the pathology, associated the symptoms with the disease which he had diagnosed, developed a mental condition of strabismus or myopia and not looking for anything except that which he thought he had found, was unable to see any symptoms or signs which pointed to a different diagnosis, whereas his conferee with mind unbiased, symptomatology fully developed, with a keen, but not unnatural eye for the mistake of another sees the case with a clearer and better perspective

*Read before the Marion County Medical Society.

which places him at an advantage and with a more correct view, and makes the mistake of his brother practitioner seem almost inexcusable.

Mistakes are not confined to the general practitioner, the surgeon, the specialist, the young, the middle aged or the old and even the wisest and most careful are not entirely free from them, though of course, they are the most common in the careless, the unthoughtful and inexperienced. The general practitioner makes the mistake of not sending his surgical cases to the surgeon early enough and the surgeon often makes the mistake of operating on these cases when it is entirely too late to do any good. The specialist in diseases of the eye, ear, and throat frequently cures anything from epilepsy to neurasthenia by correcting some error in refraction or an operation for adenoids or on the nasal cavities and is led into the mistake of promising more beneficial results than he can give in some cases. The gynecologist repairs the slightly lacerated perineum or cervix or does a curettment and meets with failure in some of his cases because he had failed to relieve all of the causes operating to lower the vitality of the patient. The rectal specialist will tell you that the chief source of marital infelicity, of human unhappiness, of meanness and grouchyngness is found in the last two inches of the alimentary canal and that there sweeps through this happiness or wretchedness, weal or woe, for the human race and that he holds the key to the situation, which all of us know is only partly true. The fact is that all of us are more or less like the six blind men of Hindoostan who went to see the elephant.

I might make out my paper and tire your patience while treating my subject in a general way along this line, but lest I disappoint your expectations I shall now deal more definitely with my subject and give you some specific instances of mistakes of the other fellow as I have seen them.

A number of years ago I was attending a man 47 years of age, who had been diseased during all of his years of manhood, who was seized with a violent chill and developed a lobar pneumonia and within two days went into one of the most desperate cases of delirium tremens that I have even seen. His children were all away from home—one married the other two at school. The family were told of the seriousness of his condition and advised to send for the children. A consultation was had from a neighboring town. The consultant agreed with the diagnosis but differed in the prognosis to the point that he said, "Well, William, you have pneumonia but you are getting along about as well as a man could

get along with pneumonia, you will be sick for a few days but you will come out of this all right."

He left the family under the impression that it was unnecessary to send for the children. I stayed with the sick man that night and it was utterly impossible to give him sleep or rest. The family asked me what I thought of his condition and I told them it was just as serious as it could be, and they then wanted to know what I thought about the children being sent for and they were informed that if they expected them to see their father alive they had better send for them. When morning came they were sent for and the doctor was again sent for in consultation, and he again re-iterated his prognosis, but not quite so strongly as before. Again the family became hopeful, but another night found the patient wilder and more restless and the next day the consultant arrived late in the afternoon and this time the consultation was had for the first time in private. His prognosis was less favorable, and my own was that if the patient lived till morning he would get well. As I had stayed with him the last two nights I insisted that he stay this night, which he agreed to do. The patient passed into the great beyond at 2 A. M., that night.

On another occasion I was attending a man about 70 years of age, who was suffering with a stomach trouble and with irregularity of the heart action together with various other troubles which I took to be reflex in character. He had been married for probably 50 years but had no children and was a man that had always enjoyed good health up to a short time before he came under my care. My treatment after making all the changes that I thought indicated, failed to give him any relief, but on the contrary he gradually grew worse. Some friends who lived in a neighboring town had for their family physician a man who stood well in his profession, that they recommended him to try. At their suggestion he made them a visit of two or three weeks and during this time was under this doctor's treatment, which he thought was of considerable benefit.

He returned to his home and after taking all except a small portion of his medicine which had been prescribed by this doctor he came back to me and brought the bottle containing some of the medicine for me to see what he had been taking, making the statement that he thought it was helping him and that he would like to have some more just like it. Of course I could not tell just what it was and as I doubted very much that he was materially better I advised him to either send his bottle back to the drug store and have it refilled or to go back and see the doctor. My ob-

ject was to have him try the medicine out and either be sure of its benefits or be sure of its failure. I had failed and I wanted the other man to find out if he failed.

He went back to the doctor and represented to him that I had become sore (which was purely imaginary on his part) because he came to him and that I had refused to have anything more to do with the case.

The next day I received a letter from this doctor volunteering the information that I had treated the old man wrong, to which I replied that if I should allow him to be the judge, jury, commonwealth's attorney and only witness against me, I felt sure the verdict would find the defendant guilty. Well, he treated the old man till both parties grew tired and with no improvement but with a feeling that something would have to be done he came back to me. His case now looked as though it might be some manifestation of tertiary syphilis and so I put him on mixed treatment, which he took for a few months, which resulted in a cure so complete that he never had but slight indications of his old trouble and died at the age of 85 years under another doctor.

In my early practice I had a patient about twenty years of age, the mother of one child who had always enjoyed good health, whose husband came to me with the statement that his wife was not feeling well and that she seemed to be losing her sight. I was unable to make a positive diagnosis but ascribed her condition to some spinal lesion in the upper part of the cord. Her pupils were widely dilated and she gradually lost all feeling in the lower limbs as well as all use of them and this extended partially to her upper extremities. She developed the most extensive bed-sores wherever there was pressure that I have ever seen and after about one year she died from exhaustion.

When she had been sick for about two weeks and before the paralysis had begun to manifest itself a consultation was asked for by the family and readily consented to by myself. The man was a very poor fellow and went several miles to get the consultant and assured him of his fee when he came. The hour was arranged for the next morning, and it was raining a steady rain—more than a drizzle, but hardly what one would call a hard rain, however, enough to cause the river to rise to the point that it threatened to soon become past fording. Both of us lived on opposite sides of the river to the patient. I was on the ground promptly at the appointed hour, the other man was delayed, and, of course, we could not tell for how long. I had other patients which I would have to see soon,

if I expected to get across the river that day. Full explanations of the conditions that had presented themselves together with an outline of the treatment was left with the explanation that if the other doctor came for him to feel free to make any suggestions or changes which he might see proper. He came an hour or so later and it was still raining and of course the river was still rising so that naturally he was in considerable haste lest he fail to get back across it. He asked a few questions, looked at her eyes with widely dilated pupils, called for the medicine which she had been taking, looked at it and saw the dose was marked thirty drops every three hours and turned to the patient and said: "Madam, no wonder you are blind."

Now this medicine was fluid extract ergot and, doubtless, he thought it was tincture belladonna. A good sensible woman who knew that she had been affected somewhat the same way, and seeing the reflection on me, told him that she had been somewhat blind before she had taken any medicine. According to her he made no effort to correct this directly, but inquired whether she had been eating any greens in the last few days. Later he told her that she had stomach trouble and womb disease (?).

Some years ago I received a letter from a well known surgeon saying that Mrs. Blank would be in to see me in a few days, that he had done a perineorrhaphy for her but that she still had a slight irritation of the bladder which would need some attention, which he desired me to look after as she had been a patient of mine. At first I was inclined to think he had written to the wrong man, but decided to await developments. In a few days this patient with her husband blew into my office. She had been a patient of mine to the extent that I had been called in her second confinement to attend her and on that occasion arrived after the baby was born.

As her delivery had been quick and easy, I did not then do, as I now always do, make an ocular inspection to see if there had been a laceration, hence I do not know how extensive it was. At that time she complained of dysuria and frequent micturition which she said had bothered her for some time. I assured her this would probably pass away and so far as I knew, up to the time of receiving this letter, it had.

She reported that while she was in the hospital and they were irrigating her bladder daily, that she did feel some better but that since she had been home she had been just as bad as before.

On examination I found that her bladder would barely hold an ounce of water and that

with a good deal of pain. I agreed to give her a tentative treatment of a couple of weeks, which resulted in no benefit, when I told her that I did not think that any treatment that I could give would prove satisfactory. The last I heard of her she was still living and still suffering with a very poor opinion of surgery. She had, as she expressed it, spent a good deal of money and been promised a cure and she was wholly disappointed.

Again an unmarried lady about 25 years of age came to me with a history that she had never had any sickness but that almost from the time she began to menstruate she had suffered with a most painful dysmenorrhea lasting two or three days. After a trial of appropriate medicinal measures with a failure to relieve her, I proposed that possibly there was some local cause for this which might be remedied. On examination I found what I took to be a stenosis that I felt was causing the trouble. I treated her with the negative electrode of a galvanic current with a view to overcoming this condition but my treatment did apparently no good, at least was not satisfactory to her. Without consulting me regarding the matter she consulted a surgeon who, she says, assured her that an operation would relieve all of her ills. She underwent all the treatment that he thought necessary but to no avail. She tells me that some surgeon said that 90 per cent of all the practice of medicine is surgery, and inquired what I was going to do when surgery came into its own. In as much as she has been one of my most constant patients, I told her that I supposed I would have to content myself with treating those folks, who, like her, had not been cured by the surgeon. She has studied the failures of surgery till she has come to the conclusion that no case with symptoms like hers is ever benefited by it. And against at least one surgeon she is unalterably biased.

Some years ago a woman about 35 years of age, mother of two healthy children, came to see me with a serpiginous ulcer extending from the edge of the hair over her left eye diagonally downward over the nose and down below the right eye. The ulcer had been there for several months and although she had consulted, frequently, doctors in Louisville, Lexington and Lebanon, some of whom I knew to be reliable, her condition gradually grew worse till in desperation she came to me.

Her history revealed nothing except what I have recorded but I immediately put her on specific treatment and told her that if it were not for the fact that I knew she had been under good doctors, I would promise her that she would be better in two weeks, as it was, I felt a little leary of promising too much, however, exacting the promise that she should come

back in that time that we might determine whether to continue the treatment. At the end of that time we both felt that we could see some improvement. She continued the treatment several months and though some twenty years have elapsed aside from the scar she seems perfectly well.

Again, on one occasion I had a case that impressed me as being one of those mild cases of appendicitis. Consultation was called but before it was held the child had improved to such an extent that it hardly seemed necessary to go through the formality of a consultation, so the case was just "talked over" in the presence of the family.

The consulting doctor very wisely informed me that it might not have been a case of appendicitis at all but might have been due to the fact that as the bile was very acid (?) that it was sometimes very irritating to that portion of the mucous membrane of the alimentary canal!

I was called in consultation on one occasion some years ago to see a child about two years old where they already had two doctors in attendance. I knew the family very well. They were poor and ignorant, but being assured that my pay was all right, I went without question.

I was met at the station by a man who let me into the situation. It was this, Doctor A., had been attending the child for several days, which had gradually grown worse and his diagnosis had been meningitis. Doctor B., when called in thought the case one of typhoid fever, complicated with meningeal symptoms. A feeling of rivalry and envy already existed between them and they were unable to agree as to the diagnosis and treatment, but had agreed to leave it to me. The child was now almost moribund and it really made no difference so far as the treatment or the outcome of the case which one was correct, and it was absolutely impossible for me to say, and I did not want to say. I took the position that it is often hard to differentiate these cases in children and that at this stage it was immaterial and that some of the symptoms clearly indicated a typhoid condition and that others clearly indicated a cerebral condition and that if we could not all agree on the diagnosis we could easily get together on the treatment and prognosis. Dr. B., feeling sure (as I think) that I would agree with him, said, "Doctor, get down off the fence and tell us what you think it is. Which I did by agreeing with Doctor A. Doctor A., began to exult and say things that did not sound good to the other man and as I was sitting between them I put my hand on his knee and asked him to desist. Of course we did not propose to leave off all medicine and leave the child to

die without any effort, so we decided that some of the intestinal antiseptics should be kept up. We separated, the two doctors going back to their own town, and Doctor A., telling everybody to whom he talked, both face to face and over the telephone, that I had agreed with him, and when this reached Doctor B.'s ear, as it soon did, he replied that it was strange if I had that I had agreed to a line of treatment for typhoid fever, thereby leaving the implication that Doctor A. was not telling the truth about it. This reached Doctor A., in a short time and he had told some of his friends that he was going to call me that night over the neighborhood telephone and that he wanted them to listen to the conversation and that they could then see for themselves what I said about it. Fortunately I was away from home all of that night and when I returned next morning, there was a long distance call awaiting me, and it was from my friend, Doctor B., putting me wise as to the trick that was in waiting for me to "show him up." I agreed with him that I would not discuss the matter over the 'phone with any one.

One frosty November night, in the days before the rural telephone made it possible to so easily and so quickly call a doctor, I was summoned to come the distance of some 7 or 8 miles to see a woman who on her return from night services had been thrown from her horse, and who, according to the messenger, had sustained in addition to numerous other injuries, a broken leg. I was tied up in a case of labor, but I thought I could get there by possibly two o'clock. He returned with this information to get further orders to go to a neighboring town for an old doctor.

I arrived on time, but he had preceded me by something like half an hour and was as busy as a bird-dog tearing bandages and cutting up bandboxes preparing to set the broken bone. The fracture was about the middle of the femur, the woman was 73 years of age and looked to be frail. I inquired while I was warming, if the old doctor didn't think plaster of Paris would be the more suitable dressing, and he replied by saying: "Now, young man, that would be the better, but under the circumstances we will have to do the best we can." I explained that I had it if he thought it better, whereupon he said that we would just use it, and that I could put it on. We agreed to give her chloroform and of course as I was to apply the dressing, he was to administer it, accordingly he took a bottle almost a full pound, which I had brought with me and held it in his hand and stood at the foot of the bed and thus addressed the patient: "Madam, now I want you to

understand that medicine does not always act just like we would like for it to do, and chloroform is a very powerful medicine and you are old and your heart is weak and sometimes people go to sleep under it and never wake up. I want you to understand this before we give it to you."

The room was full of sympathizing friends and relatives and I noticed the look of despair that spread over the old lady's face and saw the unbidden tears trickle down the cheeks of her daughter, and saw others dropping on their knees to offer up petitions to the Giver of every good and perfect gift, that she might be spared while passing through this valley and shadow of death. I felt that something should be done to prevent this tragedy and accordingly I listened to her heart and found it good and assured her that I could see no good reason why she should not stand the chloroform, and that while it was true that there is some danger from chloroform, that there is also danger in many of the everyday experiences of life, like riding on horseback, in buggies or on a train, but that the advantages so far overshadowed the dangers that we did not consider the dangers at all. For instance I said when you buy your ticket you do not ask the agent if there is any danger in riding on the train, because you know there is some.

The storm passed over, the waves (the excitement) became still and I started the old woman under the chloroform and he continued it while I applied the dressing and the patient did not die for several years afterwards.

Diplococcus Pseudotetanus.—Pontano's patient was a man of 77 with an acute toxi-infectious general condition plus a neuromuscular syndrome with painful contracture and intentional spasm. The two syndromes had developed simultaneously, everything suggesting a symptomatic tetaniform status from the same cause responsible for the acute fever and general depression. No benefit was derived from quinin or vigorous salicylic medication. A diplococcus was fluid gave negative findings on repeated examination. Transient benefit was derived from a silver salt injected intravenously, but the condition grew progressively worse, with death the twenty-ninth day after entering the hospital. He had had diffuse pains in the limbs and joints for a few days before the fever developed, and on year before had had an attack of pneumonia, but otherwise no pathologic antecedents were known.

A PLEA FOR BETTER DIAGNOSIS.*

By C. L. SHERMAN, Millwood.

Gentlemen, the time has come when every one must keep abreast of the times, and when I say every one I mean we country doctors especially, for charity begins at home and the greater part of my address will be to those of my own standing. From observation I find that our weakest point is in making a diagnosis. I repeat again that the time has passed when we can sit down and treat our patient expectantly, as we call it, until mother nature makes the case plain. How often it is that a case runs the greater part of its course before we recognize what it is. How many of us go in, look at our patient's tongue, count his pulse and take his temperature and that is the extent of our examination? I know a man that makes his diagnosis of typhoid from the appearance of the tongue alone. Now we all know that this is not the way to practice medicine, and it is a shame that we have such men in the profession. Yet we are all guilty to a greater or lesser extent. Old women often diagnose the case ahead of us and many times have I seen cases treated for years without a diagnosis ever having been made.

Gentlemen, this ought not so to be, at the present time when we have everything offered us to assist us in making a diagnosis. With the present day appliances we ought to be able to take a patient and examine him from A to Izzard so to speak, and that with some degree of accuracy. And the time is at hand when we will have to do it or allow our patients to drift into the hands of the man that is doing it.

People are opening their eyes and they are not going to stand for guesswork much longer. The specialist fever is growing day by day, and will continue to grow until we general practitioners awake to our sense of duty and go down after things like we intend to dig them out and find out what is the matter with our patients.

Now one will say, "we haven't time to go into the details and to dig down after the technical points." To be sure, this is true in many instances, but in many others that make the excuse, if you will take the pains to find out, you will find that they have the time to loaf around grocery stores, barber shops, livery stables and the like, spending a part of their time in talking politics, war talk and such like, in which there is no profit to the man who so indulges or to his fellowman, excepting the man of that special profession.

Now listen, if we continue at the present rate, in twenty years from now about all we

general practitioners will be fit for will be to direct our patients as to which specialist they should consult, whether a lung specialist, throat specialist, rectal specialist, or something else, and in most instances we will have to send them to a special diagnostician, before we will know to which branch they belong. I tell you gentlemen, if I was going to specialize to-day I would select for my line that of a special diagnostician, to my mind it is the greatest field open.

I am not fighting specialists, neither am I claiming that we ought to be specialists on everything, but I do say this, that we ought to be able to diagnose a case occasionally. The trouble is, we are not putting into use that which we do know and in many instances we are not using the appliances that we have.

To illustrate, if you should have occasion to step into a doctor's office to make a urinalysis in some instances they would not have a urinary outfit, while in others they would have all but the alcohol lamp and in still another he might have the test case complete but when it was brought forth you could tell by its appearance that it had not been in recent use, now this is not only true in one town but I will guarantee that you will find it so all over the country.

Of course you city doctors do not have these things to do where you have a laboratory on every hand to make your examinations for you, and in many instances your diagnosis, else you might be guilty of the same offense. But we country doctors must rely on our own ability to do such things. The kidney is an important organ and we all know how to diagnose kidney lesions. But it seems that the majority of us are waiting until the general symptoms are sufficient to make the case plain. We are not trying to get them in their incipency, too, we are allowing too many chronic cases to go unnoticed. I say, and without contradiction, too, I think, that it is impossible to diagnose a chronic kidney lesion without a repeated urinalysis, unless it is after the case is far advanced.

Then, it is almost impossible, without a repeated microscopical examination, and how many of us have a microscope? or would take the pains to use one if we did? They are not so expensive but what most every one could afford it, and if you will get in the habit of using one, you will wonder, "Well, how did I ever practice without it?" Just think of the things in which a microscope is almost indispensable. Not only acute and chronic kidney lesions, but who can make a diagnosis of anemia, such as chlorosis, progressive pernicious anemia, leukocytosis or true leukemia, without the aid of a microscope. What about

*Read before the Muldraugh Hill Medical Society.

pyelonephrosis, nephrolithiasis, and mild cases of cystitis?

I remember a case that was taken to a surgeon for an appendiceal operation, and when the urine was examined microscopically, it showed pus and blood, which showed that it was only a stone that had lodged in the right ureter at or about the region of the appendix. Could this have been done in the beginning, it would have saved quite a little expense and worry on the part of the family, and much embarrassment on the doctor's part.

Now these things are easy, do not consume much time and they are in reach of us all. The only thing is, we are not doing it. Another thing that we could do and I dare say that the majority of us are not, and that is, how many of us try to diagnose various troubles with the stomach, more than to listen to our patient's story, look at his tongue and, maybe, feel over his belly, tell him he has stomach trouble and prescribe. As many as do this will have trouble treating the stomach, and in many instances will have to refer his patient.

Now listen, this is not hard. Strip your patient's belly to the skin, give him a drachm of soda and one of tartaric acid dissolved in separate glasses of water, lay him on a couch and watch for the outlines of the stomach; in most instances you can outline it. This may tell you quite a good deal. Give him a test meal, a couple of slices of stale bread and a glass of water then wait one hour, introduce your stomach tube, draw off the contents of the stomach and examine as follows:

Take 5 c.c. of the filtered contents, to this add two or three drops of a .5 per cent. solution of di-methylaminoazo-benzin, then use enough sodium hydroxide, one-tenth solution, until the red color is gone, then multiply the number of c.c. of the sodium solution used by twenty and it will give you the per cent. of free Hcl.

To find the total acidity, use the same solution as used in the above, to this add two or 3 drops of a 1 per cent. phthalein solution then enough sodium hydroxide until the red color returns, this plus the amount used in the first test multiplied by twenty will give the total acidity.

To get the free acid and acid salts, use 5 c.c. of a fresh solution and add to this two or three drops of alizerin-sulphonate 1 per cent., then add enough of the sodium hydroxide solution until you get a cherry red or violet color then multiply by twenty.

For combined Hcl. subtract the free acid and acid salts from the total acidity.

To get the organic acid and acid salts, from the total acidity subtract the sum of the free Hcl. and combined Hcl.

Test for lactic acid. Take 4 or 5 drops of carbolic acid and enough water to fill your test tube about one-half full, to this add 2 drops of ferric chloride solution 10 per cent. then add your stomach contents; if lactic acid be present it turns yellow.

Also the test for occult blood is easy and nothing especially hard about the above and when you simmer these all down you have about all of importance that is to be known about the stomach contents, and if you have a microscope you can look for the Opler-Boas bacillus which is usually found accompanying cancer. Remember every symptom you run down is a witness added to the case, and if you were a lawyer and had a man on trial for his life, you would have the case laid over for months in order to get an important witness to testify in the case. Now our calling is no less important than that of the lawyer and, in many instances, life depends just as much so as if he was on trial for his life.

Still another thought. Are we diagnosing our tubercular cases in their beginning? We do know that in this case life depends, and we should not be guilty of leaving a single thing undone that would throw a single ray of light on a tubercular case or in any way help us to make an early diagnosis.

Now we might go on in this way for hours talking about what we should do and what we can and ought to do, but let this suffice for the present. Though I do hope that our coming together and talking these things over may stimulate us to try harder to make better doctors, for I do know that if we do not know what a disease is, then we cannot treat it successfully neither can we hold the confidence of our patients as we should for a doubting mind will soon reveal itself.

Oriental Sore.—Gachet writes from the medical school at Teheran in Persia to extol the curative action of intravenous salvarsan treatment. The sore heals in from three to five weeks after one or two injections, with an interval of one or two weeks. He has found the Leishman bodies in the body of a fly common on dogs, the *Hippoboscidae* canina, and thinks that this fly has something to do with the transmission of the affection. Camels, horses and dogs are subject to it, but in Persia he has found it only in dogs; fifteen of twenty-one dogs brought in from the street showed the characteristic lesion. Intramuscular salvarsan injections cured the mall in from three to five weeks. He adds that the fact that these lesions appear in man only on parts exposed, confirms the theory of fly intermediation in the transmission of the disease.

FURTHER MODIFICATION OF FERGUSON'S OPERATION FOR EXCISION OF UPPER JAW.*

By JOHN W. PRICE, Louisville.

REPORT OF CASE OF CARCINOMA OF ANTRUM OF HIGHMORE.

Malignant growths, usually carcinoma or sarcoma, are the most frequent conditions which demand complete excision of the upper jaw. Benign tumors usually are dealt with by partial excision. The operation to be of any great value in malignant diseases, must be employed at the earliest possible moment after the onset of the disease, otherwise the prognosis is usually bad.

According to Treves, part iii, p. 270, the operation was originally described by Lizar in 1826, (*Anat. Plates* p. 9, Edin, 1826), but was first performed independently of Lizar, by Gensoul in 1827, ("Lettre Chir. ect., Paris. 1833"). The excision of both superior maxillary bones at one sitting was first performed by Heyfelder in 1844. Practically the operation done to-day was originated by Blandin (*Anat. Topograph* p. 122) in 1834. The French text books speak of the operation as Nelaton's or Liston's, but most English text-books describe it as Ferguson's. Farabeuf's principal modification of Ferguson's operation consists in the change of order in which he makes his incision, and the different order in which the nasal, orbital, and malar bones are separated. The lip is not divided until toward the last part of the operation. In this way the danger from hemorrhage is greatly lessened.

Before undertaking this operation, it is necessary to familiarize oneself with the anatomical points, especially the bony connections which are to be dealt with, and the blood-vessels.

For several days before the operation, the teeth should be thoroughly overhauled, and the mouth cleansed repeatedly before and after taking food.

Formerly operators ligated either the common, or external carotid arteries before the operation, but we believe that these methods add greatly to the danger of the operation and when the procedure is carried out as described below, the danger from hemorrhage, we found to be very slight.

A temporary tampon of gauze in the pharynx just before the final removal of the bone was sufficient. The position of patient on the operating table is with head elevated on one or two pillows. The anesthetic ether, may be applied by naso-pharyngeal tubage as

suggested by Crile, or chloroform may be given by the open method. If the open method is used, have the anaesthetists wear sterile gloves, and have the frame and gauze which is applied to the face, also sterilized, and if the frame and gauze become soiled, fresh sterilized ones should be immediately substituted.

Tracheotomy is often advised by some as a preliminary precaution against patients suffocating from hemorrhage, but we believe it only adds to the dangers of the operation and in most cases would be found unnecessary, and in the operation as hereinafter described, it would practically never be required.

Three trained assistants and an anesthetist are sufficient to cope with any condition which should arise during the operation.

The mortality of the operation at Göttingen was estimated to be 23 to 31 per cent. in 74 cases. Sixteen died from lung complications. Scudder states that Bryant's 230 cases of re-section gave mortality of 14 per cent.

I wish to report the following case, which was referred to me by Dr. Louis Frank. The diagnosis of Carcinoma of antrum of Highmore had been made, and complete excision of upper jaw recommended.

March 13, 1915. The patient was a woman, Mrs. L. B., age 45. Family history negative for cancer. Past medical history was negative except patient had pneumonia when a child. Her general health had always been good. Present illness began six months ago, with severe frontal headache. She was first treated for neuralgia, and later had all her teeth extracted. This did not give relief. Soon she noticed that her nose was obstructed, and when she cleaned it out there was a foul discharge. Six weeks ago, she had an operation for a tumor of the nose, since which time there has been rapid swelling on the left side of the face, and marked tenderness. The left eye slightly protrudes. Patient states that she has lost considerable weight during the past six months.

Examination shows swelling on left side of face, beneath infra-orbital process. This swelling was tender on palpation. The skin seemed to be normal, except for slight redness and edema. There was a discharge from nose which was very foul, and resembled uterine discharge in cancer of uterus.

Complete excision of superior maxilla was decided upon.

The operation was performed on March 13, 1915, by Dr. John W. Price, assisted by Drs. Frank, Sherrill and Arnold. Drs. Long and Henderson administered the chloroform, one or the other of them maintained perfect asepsis throughout the operation. On account of the foul discharge in the nose it was consid-

*Read before the Muldraugh Hill Medical Society.

ered inadvisable to use the naso-pharyngeal tube. The steps of the operation were as follows:

The incision began over the left malar bone, and was continued toward the nose about one-quarter of an inch below the infra-orbital process. It was then carried along the grooves between the nose and the cheek to the ala of the nose.

A chisel was then used to divide (1) the malar bone to the speno-maxillary fissure, (2) the frontal plate beneath the orbital ridge, (3) the nasal process.

Forceps were then clamped over the upper lip at either angle of the mouth. The skin incision was continued beneath the nose to the mid-line and completely through the upper lip. The cheek and lip were reflected toward the ear, and the connection between the cheek and the alveolar process completely separated.

With bone forceps the incision through the malar bone as described above was completed. The nasal cartilage was separated from the nasal process of the maxillary bone; large bone forceps were inserted immediately in the mid-line and the alveolus and the hard palate were completely divided with one movement. The alveolar process and the face of the bone were now grasped with lion jaw forceps and the remaining attachments of the superior maxillary bone fractured and the bone completely removed. A portion of the infra-orbital plate was thus torn away. After the removal of the bone, a large mass of carcinomatous material was seen lying free against the nasal septum. A temporary gauze tampon was applied and the actual cautery was used freely in the cavity left by the removal of the bone to control the hemorrhage, and also to kill any malignant tissue. One branch of the facial-artery was clamped and ligated. The defect was packed with three long gauze strips, which were to be removed through the mouth.

Skin incision was closed completely with No. 1 chromic cat-gut, the mucous membrane of the upper lip being sutured in addition with fine silk. A plain gauze dressing was applied with adhesive plaster.

As soon as the incision had reached the subcutaneous tissue below the infra-orbital ridge, it was evident that the anterior plate of the maxillary bone had undergone destruction, because cancerous tissue was at once seen. This tissue seemed to be lying free for the most part in the antrum of Highmore, except at one point where it was attached to the mucous membrane.

PATHOLOGICAL REPORT BY DR. F. S. GRAVES.

Specimen consisted of portion of upper left jaw with muscle, connective tissue and frag-

mented pieces of thin bone attached. All through the specimen is a mass of gray, coarsely granular, fungoid material, cut surface of which is gray and granular. The granular material is attached to the posterior portion of the jaw-bone, the anterior portion being covered with smooth epithelium. The teeth are absent.

MICROSCOPICAL DESCRIPTION.

Sections show masses of undifferentiated, atypical epithelial cells of alveolar arrangement, supported by scanty connective tissue stroma. There are many mitoses in the tumor cells, at least one multiple, and several tumor giant cells, including many polymorphonuclear leucocytes, being found among the tumor cells and in the stroma. Diagnosis: Carcinoma (malignant adenoma).

POST-OPERATIVE HISTORY.

March 15, 1915.—The three gauze strips were removed from the cavity through the mouth. There is protusion of the eye-ball and marked edema of the eye-lids, and over the supra-orbital ridge extending out to the cut edge of the malar bone and almost to the ear. The incision is clean, there is no redness. All dressings were removed and ice-bags were applied at intervals.

March 16, 1915.—Edema not so marked. Incision is clean. Vision is good. There is some secretion from the eye. Speech is greatly interfered with since the removal of gauze strips.

March 17, 1915.—Patient was entirely free from pain.

Marked improvement in edema and speech. Picture taken.

April 16, 1915.—Patient returned home. The wound had healed entirely by first intention. There was present moderate edema of the tissues beneath the eye. There was no discharge from the nose. The defect within the mouth practically healed by second intention.

Iodin in Erysipelas.—Magi relates that in his experience painting the inflamed region abundantly with tincture of iodine had an "actually brilliant effect" on the infectious process, especially with enlargement of the lymph glands in the arm following infected wounds of the hands. The lymphangitis subsided almost constantly after once painting with the iodine, and rebellious erysipelas yielded to repeated applications. In the severest cases he supplemented this with antistreptococcus serotherapy. An attack of erysipelas of the face and scalp on the assistant surgeon at the clinic also yielded promptly to the iodine treatment.

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NEXT MEETING STATE ASSOCIATION.
HOPKINSVILLE, OCT. 17, 18, 19, 20, 1916

COUNTY SOCIETY REPORTS

Boyle—The June meeting of the Boyle County Medical Society was held at the Hotel Calvert, Perryville, June 13th, 1916, with the president, Dr. J. R. Cowan in the chair and the following members present: George Cowan, Vance Rawson and T. R. Griffith, of Danville; W. D. Hopper; D. M. Godby, H. M. Pittman, and J. E. Caldwell, of Perryville and J. Tom Price and W. D. Powell, of Harrodsburg.

It was voted to try and rejuvenate the Central Kentucky Medical Society and Dr. Price, the Secretary of that Society being present, he stated that he would call a meeting at Danville, July 20th. It was suggested that a program for the coming year be prepared and that all four county societies having membership in the Central Kentucky Society meet together in rotation. Dr. Vance Rawson was invited to read a paper and selected as his subject, "Superstitions, Medical and Otherwise." at the July meeting.

W. J. Childers, of Hustonville, was invited to read a paper on "Pellagra."

A resolution was passed endorsing the work of the Boyle County Health League and its nurse, Miss Evers, and urging the county authorities to continue the support of this work. A copy of this resolution was ordered printed in the papers and to be sent to the secretary of the Woman's Club of Danville.

The president was authorized to appoint a committee to draft an ordinance covering the isolation and quarantine of the infectious and contagious diseases of childhood. Drs. Brown and Hopper were appointed. Drs. J. R. Cowan and T. R. Griffin were appointed a committee by the Secretary of the Central Kentucky Medical Society to provide the supper for the meeting in July. The society was unanimous in its praise of the supper furnished by Mrs. J. Q. Calvert.

THOS. R. GRIFFIN, Secretary.

Barren—The Barren County Medical Society met in Dr. Bott's office, Glasgow, June 20, 1916, with the following members present: Turner, Porter, Smock, Taylor, Carroll, Miller, Godby, Sidens, York, Aeton, Palmore, and Howard.

The society was called to order by President Smock.

The minutes of the last meeting were read and approved.

A number of cases were reported and discussed, nearly every member present taking part in the discussion.

F. G. Carroll read a valuable paper on "Summer Diarrhoea," which was listened to with marked interest, the subject being a timely one. Several members gave their personal experience months.

Motion carried that Dr. Carroll's paper be sent to the Journal for publication.

The following names have been enrolled as members of this society since our last report: E. D. Turner, Cave City; James W. York, Lucas; Thomas L. Jones, Cave City.

Agreed on motion that our annual social meeting be held in Glasgow on Wednesday, July 19th. The following committees were appointed to arrange the details of the meeting, and report the same to a called meeting as soon as the program is completed:

Committee on Entertainment—A. T. Botts, and T. F. Miller.

Committee to Arrange for Clinics, Securing Lecturers, Etc.—C. C. Turner, and C. C. Howard.

There being no further business, the society adjourned to meet in Glasgow, July 19th at 10 o'clock A. M.

J. M. TAYLOR, Secretary.

Christian—The Christian County Medical Society held its regular meeting June 20, 1916, the following program was rendered:

F. M. Stites read a paper on "Carelessness in Diagnosis."

J. H. Rice read a paper entitled "Fumigation, Gaseous Disinfection."

These were brief but good papers.

The following members were present at the meeting: Drs. Rice, Stites, Nordard, Southall, Reynolds, Lacy, Sandbach, Gates, Riley, Haynes, Moseley, Sargent, Gaither, Bell, Harned, Johnson, Frank M. Stites, Jr.

The next meeting will be held July 18, 1916, just two more monthly meetings before the State Association meets with us.

J. W. HARNED, Secretary.

Hardin—The Hardin County Medical Society met July 13th at the office of Dr. Mobley with the following members present: Drs. Mobley, English, O'Connor, Allen, Nusz, Hubbs, Strickler, Aud, Rogers and Alvey.

The meeting was called to order by the president, Dr. Allen, and the minutes of the previous meeting were read and approved. The Harrison law was discussed by most of the members present.

The subject of contributing to the support of the University of Louisville was taken up without any definite agreement being reached. An effort was made to have a paper by some member for each meeting but no one would volunteer to furnish a paper for the next meeting so the subject was dropped.

C. W. Rogers reported a very interesting case injury to an eye which was freely discussed by all the members present.

C. Z. Aud made an interesting talk on "Polio-

myelitis," which was afterwards discussed by the society.

"Pellagra was next taken up and discussed by all the members present.

After enjoying the most interesting meeting of the year which took up most of the day the society adjourned.

W. F. ALVEY, Secretary.

Pendleton—The Pendleton County Medical Society met at the Fair Grounds in Falmouth on Wednesday, July 12, 1916.

The following members were present, Drs. Blackerby, Brown, Blades, Chipman Clark, Daugherty Eckles, Ellis, Hopkins, Kendall, McKenney, Nichols, Wilson, John E., Woolery. Drs. J. R. Meek, Covington, Ky., F. L. Ratterman, Cincinnati, O., and J. A. Caldwell, Newport, visiting.

F. L. Ratterman presented a very interesting series of cases of ulcer of the stomach, with numerous X-ray plates, showing the different ways in which the disease may affect the stomach. This was a very interesting lecture and coming from one of the best diagnosticians in Cincinnati or anywhere was highly appreciated by all present.

J. R. Meek, a home product, and, by the way, a man that is and has made good, gave us quite an interesting talk on some cases of Hernia, which was to the point and well received. We are always proud of our boys.

J. A. Caldwell, also home product, is developing into a first class specialist along the line of nose and throat surgery, and we bespeak for him a very successful career.

This being an open session, the ladies soon announced that dinner was ready and we repaired to the dining hall where was spread an elegant repast of fish and spring lamb, and the way the doctors disposed of it showed that they know what is good for the inner man.

Afternoon Session.

Col. Maus, of the State Anti-Tuberculosis League gave us his celebrated lecture at the close of which we had an enjoyable sociable. Every one seemed to enjoy the meeting.

W. A. McKENNEY, Secretary.

Happiness is the natural and the normal; it is one of the concomitants of righteousness, which means living in right relations with the laws of our being and the laws of the universe about us. No clear-thinking man or woman can be an apostle of despair.—Ralph Waldo Trine.

Plant life is sustained largely by air. When not given air and sunshine the plant soon dies. This applies also to animal life. If not given fresh air and sunlight man dies prematurely.

NEWS ITEMS AND COMMENTS

Dr. and Mrs. W. S. Gebhart and daughter, Lucile, have gone to Chicago where Dr. Gebhart will take a four weeks post-graduate course in surgery and diseases of women and children. "

Dr. J. M. Williams, the well known Paris physician, is carrying his right arm in a sling as a result of having the member sprained while cranking his automobile.

Dr. J. A. Orr, of Paris, was severely bruised when the horse attached to his buggy became frightened on Seventh street near the plant of the Bourbon Laundry and ran away. Dr. Orr was thrown from the buggy, alighting on his side on the pavement.

Dr. Frank M. Stites, Jr., spent a few days with his parents, Dr. and Mrs. F. M. Stites, of Hopkinsville. He was graduated in 1916 medical class of the Louisville University, and will be connected during the coming year with the Louisville City Hospital.

Dr. Richard RoBards, of Braxton, sustained a badly broken arm recently. He was standing on a chair gathering cherries when the chair turned and he fell on his right side. He has suffered much from the injured member, but is getting along nicely now.

Dr. J. B. Shacklette, of Louisville, reported the theft of his automobile from in front of 422 West Jefferson street. Dr. Shacklette left the car at 10:30 o'clock, and when he returned an hour and a half later it was gone. A case of surgical instruments was taken with the machine.

Dr. B. K. Menefee narrowly escaped serious injury and the wrecking of his automobile on a trip to Verona. In passing a buggy near Scott Smith's he turned on the side of the road, his machine took a plunge over a bank and was saved from turning turtle by a wire fence. He phoned for help and with the assistance of a block and tackle extricated the machine and went on his way.

The Graves County Medical Society in session at Mayfield, heard lectures on the treatment and prevention of tuberculosis by Dr. J. W. Warner of St. Louis, and Col. L. M. Maus, secretary of the State Tuberculosis Commission. Col. Maus held a meeting with the Civic League of the Woman's Club and organized a community health and welfare league and discussed the organization of a tuberculosis sanitarium for the First Congressional district.

Dr. A. J. Bryson, who has been in the City Hospital in Louisville, Kentucky, has moved back to Fullerton, where he has been in the practice of medicine for ten years. He anticipates moving to Ashland, Kentucky, in the near future and will give special attention to surgery, having spent the past six months in service at the hospital.

The Kentucky Valley Medical Association, comprising all of Eastern Kentucky, closed its session June 30 with a lunch and fish fry at the lake. Officers elected were: Clarence H. Vaught, president; Dr. Wilson Bach, Jackson, vice president; Dr. J. H. Evans, Beattyville, secretary and treasurer. Jackson was chosen for the 1917 meeting.

Dr. W. W. Durham, of Crofton, has been appointed by the Board of Control as second assistant physician at the Western Kentucky State Hospital for the Insane. He succeeds Dr. Roy Robinson, who resigned several weeks ago to practice his profession at Madisonville.

Dr. John Tyler Sweeney, thirty-seven years old, son of Mrs. Katharine C. Sweeney and the late John T. Sweeney, died at the home of his mother of a complication of diseases. He had been ill for the past eight months, but had been confined to his bed for only a few days. He was graduated from the Louisville College of Medicine in the class of 1906 and practiced medicine in Louisville with offices in the Atherton building until his health failed. He was for some time associated with Dr. T. Hunt Stucky.

The Boyle County Medical Society held its regular meeting at Perryville, June 21, 1916. The members and two visiting physicians were present, Dr. Tom Price and Dr. Will Powell, of Harrodsburg. The main business before the society was the reorganization into districts of the old Central Kentucky Medical Association, comprising the counties of Boyle, Lincoln, Garrard and Mercer. The Perryville physicians entertained the visitors at a banquet. The next meeting will be held July 20 in Danville, when the reorganization of the districts will be completed.

The Pulaski County Medical Society met at the office of Dr. Parker, Thursday, June 9, 1916. The following members were present: Dr. S. G. Cain, Dr. A. Cain, Dr. Wahle, Dr. Bolin, Dr. Parker, Dr. Taylor, Dr. Norfleet, Dr. Baute, Dr. Alexander, of Somerset; Dr. T. M. Garner, of Valley Oak; Dr. Warren and Dr. Gibson, of Science Hill; Dr. Price, of Dabney; Dr. Isaacs, of Woodstock, and Dr. Cundiff, of Stearns.

Several Clinical cases were presented and discussed. A number of cases were reported and

discussed by all the doctors present. Only other routine business was attended to.

The Clark County Medical Society held a meeting Friday night with Dr. H. R. Henry. There was much disappointment because of the fact that Dr. L. M. Maus, president of the State Tuberculosis Commission, who was scheduled for an address, was unavoidably detained in Louisville and was unable to be present. There was a good attendance, and the doctors had an informal session.

The Muhlenberg County Medical Society met at Greenville at 1 o'clock p. m. Wednesday, June 28.

Papers were read by the following physicians: T. G. Turner, of Dunmore; H. Y. Slayton, of Greenville; R. B. Morris, of Beech Creek.

Other physicians reported cases and took part in the discussions.

As our readers are well aware, these columns have always been closed against advertising anything we did not think possessed merit. The mere fact that the Publishers Adjusting Association Advertisement appears on page VI of this issue is ample evidence that we consider them responsible, and from the evidence we have before us, we might add that we consider them thoroughly reliable and competent collectors of doctors' old accounts on a most reasonable basis.

The Fifth Convocation of the American College of Surgeons will be held at The Bellevue-Stratford, Philadelphia, on the evening of October twenty-seven. The program of the Convocation will be mailed later to the Fellows. Academic costume will be worn.

Opportunity will be offered during the day to the Fellows who have not already done so to sign the Membership Roll.

It is advisable to make hotel reservations at this time since the Clinical Congress of Surgeons meets in Philadelphia during the same week.

FRANKLIN H. MARTIN,
General Secretary.

BOOK REVIEWS

Treatise on Fractures.—By John B. Roberts, A. M., M. D., F. A. C. S., Professor of Surgery in the Philadelphia Polyclinic and College for Graduates in Medicine; and James A. Kelly, A. M., M. D., Associate Professor of Surgery in the Philadelphia Polyclinic and College for Graduates in Medicine. Octavo of 700 pages, 909 illustrations. Philadelphia and London. J. B. Lippincott Company, 1916. Cloth \$6.00.

To thoroughly review a volume like this within the limits of these columns would be an impossibility. Authors, illustrators, typographers and

publishers have combined knowledge, skill and taste to place this handsome volume in compact, convenient form in the hands of the profession. The Roentgen ray has placed an instrument of precision in the hands of the surgeon and the fullest advantage has been taken of this method of showing by radiogram every variety of fracture and displacement and results of treatment.

Social Travesties and what They Cost.—By J. T. Atkinson, M. D., Dallas, Texas. 12 mo. of 150 pages. New York, Vail-Ballou Company.

The great army of earnest people who are seeking to know and to spread the gospel of health and morality will welcome this addition to the literature upon the social evil. Sound in theory and practice, entirely free from cant or hypocrisy, this author would lift mankind out of brutish indulgence on the one hand, and prudery and ignorance on the other. While not minimizing the moral and sentimental side of the question, and without overburdening the reader with statistics, he skillfully develops an interesting line of reasoning upon the practical economic side.

The Kinetic Drive; Its Phenomena and Control.—By George W. Crile, M. D., Professor of Surgery at the Western Reserve University. Octavo of 71 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1916. Cloth \$2.00 net.

Necessarily and admittedly dogmatic within the covers of so brief a volume, the author carries conviction into the mind of his reader. He postulates that the human body is an automaton, moved by a thousand emotions, subjected to attack by an infinity of enemies within and without; from the extreme psychic and physical effort put forth by the soldier under the demands of the greatest of wars to the voluble emotion of a Jew show keeper seems a far range; yet these, with fear, hate, fatigue, rage, shame, trauma, infection, pregnancy, and a host of other stimuli have identical results in the destruction of vital forces, and symptomatology and pathology are strikingly similar.

Dr. Crile's studies lead him to believe that we are on the threshold of revelations of vast importance as to medical and surgical means of blocking the kinetic drive by controlling the output of the thyroid and adrenals in acute and chronic conditions.

The Art of Anesthesia.—By Paluel J. Flagg, M. D., Lecturer in Anesthesia, Fordham University Medical School; Anesthetist to Roosevelt Hospital; Instructor in Anesthesia to Bellevue and Allied Hospitals, etc. Octavo, 350 pages, 176 illustrations. Philadelphia and London, J. B. Lippincott Company, 1916. Price \$3.50.

On a systematic, orderly plan the author discusses anaesthetics, anaesthesia, anaesthetists and

the anaesthetized (patient). Anaesthesia is indeed an art. To skillfully administer the dose that either calms and soothes, or else quickly and subtly carries one into a sleep that knows no awakening, requires a complete knowledge of more than one field in medicine. This is no place for the tyro, the incompetent, the dullard, the half baked or half trained nurse or physician.

Dr. Flagg's book will make a better anaesthetist of one who is qualified and his frank discussion of the dangers that attend lack of skill, it is hoped, will deter rashly confiding this important procedure to unskillful hands.

Your Baby.—By Dr. E. B. Lowry. This is a book every young mother and prospective mother in the land should read; for it explains motherhood in such a plain way as will remove the fears and troubles of many women. Everything which a mother wants to know and must know regarding the care of herself and her baby is clearly told in this helpful book. It shows how to avoid mistakes, what to do and what not to do.

The future of the nation depends upon the babies of to-day and therefore any book which helps to give a human life a fair start in health should be welcomed and widely circulated. Such a book is this splendid volume by Dr. Lowry. That there is great need for the fullest possible circulation of the book is evident when we consider the appalling fact that nearly half the babies born die before they are a year old means that about 300,000 such babies die annually in the United States.

Dr. Lowry not only pleads for better babies, but plainly tells how to prepare for them; everything that is essential to the happiness and health of the mother and child is told. Nearly half the book is devoted to the mother's care of herself before the baby comes, and this part alone is invaluable to an expectant mother. A very timely chapter considers the various methods offered for painless childbirth, and much light is thrown on some fallacies and uncertain methods.

This book contains the latest and best approved methods for the care of the baby,—its feeding, clothing, exercise, sleep and training. It is full of common sense help and facts that many mothers are ignorant about or might overlook. Like all Dr. Lowry's books it is permeated with an earnest spirit of helpfulness and wise, sane direction. If a prospective mother can have only one book on the subject of maternity and infancy it should be this safe and practical guide by Dr. Lowry, who is an authority of long experience in the health care of women and children. Any of our members may commend this book to women with confidence. Forbes & Co., Chicago. Price, \$1.00 net.

Cancer of the Stomach.—A Clinical Study of

221 Operatively and Pathologically Demonstrated Cases, by Frank Smithies, M. D., Gastro-enteriologist to Augustana Hospital, Chicago. With a Chapter on the Surgical Treatment of Gastric Cancer, by Albert J. Oschner, M. D., Professor of Clinical Surgery in the University of Illinois. Octavo of 522 pages with 106 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$5.50 net; Half Morocco, \$7.00 net.

In a volume of this size, devoted to a specific disease of one organ, as indicated by the title, one may naturally expect to find an exhaustive study of the entire subject. The greater part of this book is very properly devoted to the recognition of symptoms and means of diagnosis. Herein lies its greatest value to the general physician as well as to the surgeon. No recognized diagnostic procedure is ignored yet the author has the courage to caution that "Rash surgery is to be condemned, but a sharp scalpel is often a more satisfactory differential diagnostician than is the keenest mind, medically," and again, in the chapter on non-surgical treatment, "When made by trained surgeons, abdominal section is attended by a mortality of 1-2 of 1 per cent. There is a mortality of 100 per cent. in the non-surgical treatment of gastric cancer." This last chapter does not offer anything misleading in the way of a substitute for surgical treatment, but indicates lines of treatment that must be applied to any case of the disease whether operative measures are attempted or withheld.

THE FORUM

A. T. McCormack, M. D.,
Secretary State Board of Health,
Bowling Green, Ky.

DEAR DOCTOR:

Am having a large quantity of hand bills struck urging better sanitation which will be distributed over the county.

Monday our County Schools open and I believe it can be truthfully said that there will not be a teacher or pupil in attendance who has not complied with the vaccination requirements. Is there another county in the State that can say the same?

Fully fifty per cent. of the privies at the schools will have been made fly-proof and have galvanized iron receptacles by that time and all the rest within a week or two. Lime will be kept in the privies and the teachers have been instructed to see that it is used daily.

Since invoking the aid of the grand jury this spring the trustees are assisting me almost unanimously. Some trustees have resigned and it was no trouble to get better men to serve.

Bulletins and large posters on "Swat the Fly," one of which I am sending under separate cover, to be posted in every school house were given the teachers Wednesday at their institute, where I asked their cooperation in health work.

Thanking you for assistance rendered me, I am, with kindest regards,

Yours very truly,

C. B. KOBERT, M. D.,
County Health Officer.

Dr. C. K. Kobert,
County Health Officer,
Lebanon, Ky.

DEAR DOCTOR:

Yours is about the most encouraging letter that has come to this office in a long time. It shows so plainly what knowledge, courage, tact and perseverance will enable a health officer to do, that I am taking the liberty of publishing it with this reply in the next issue of the JOURNAL.

As an evidence of appreciation of your services, the Board is ordering sent to you a copy of McNutt's Manual for Health Officers, the best work of its kind which has appeared in our language. Am also sending you, under separate cover, one hundred copies of the privy bulletin which has just been received from the Public Printer, and the same number of new bulletins on the Communicable Diseases.

Congratulating and thanking you for what you have accomplished in protecting the health and lives of the people of your county. I am

Cordially yours,

J. N. McCORMACK,
Acting Secretary.

PLAN FOR THE BABY HEALTH CON-
TEST OF THE KENTUCKY STATE .
FAIR, LOUISVILLE, KY., SEP-
TEMBER 11-16, 1916.

The first Baby Health Contest held at the Kentucky State Fair was in 1913 with 136 entries, in 1914 there were 180 babies entered, and in 1915, 221.

The object of this contest is to improve the health of our people, beginning with the children by giving them a start in the right direction. It is to help parents, mothers especially, to better understand what their children need.

Thorough examination, mental and physical, notes both good points and bad. The good points are to be trained and emphasized, the bad ones are to be removed or remedied. What scientific care and common sense have done for horses and cattle, can surely do won-

ders for the human being, as he has intelligence to respond.

A doctor scores a baby in just the same manner in which a stock judge scores horses, sheep and cattle. The card used is that prepared by the American Medical Association, and is a standard of excellence accepted throughout the country.

We would like to have an entry from every county in the State, and call on county health officers, clubs, those interested in child welfare and progress generally to help us do this.

Will you see that your county is represented.

HOW EXAMINATIONS ARE CONDUCTED.

This general plan of holding the contest will be carried out, though some of the details may be changed if necessary.

Mother or guardian applies to Superintendent to enter contest. Entry card sent; when this is returned it will receive a number, and card of appointment for examination will be sent. A register of appointments and entries will be kept in the office.

When baby is brought to the contest mother will be shown waiting room, clerk will take appointment card: mother will wait at desk while clerk fills in history on front page of score card. The baby's attendant should have the score card on string tied to her wrists so it will not be lost. Everything may be done in the scoring, except weighing, measuring, examination of symmetry, skin, muscle, etc., before undressing the baby.

Mothers will bring pillow slip with them into which baby's clothes may be put and carried along, so as not to become confused with clothes of others.

When the first page of score card is made out by clerk, mothers will pass to doctors in order of appointment; mother will hand card to first doctor, who fills in his part, mother carries card to next doctor until all is filled in. The card is then given to chief clerk, who counts up the score; mother then leaves the room.

Every mother should bring towel and baby blanket.

It will not be possible to announce results of contest on the day when examination is made.

Every child in contest is expected to appear Friday, September 15th, at State Fair. Result of contest will be announced, prizes awarded at 3 p. m., in the Pavilion.

For further information address,

MRS. CHARLOTTA O. WOODBURY,
State Fair, Louisville, Ky.

ANNUAL NUMBER

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No. 9

EDITORIAL

THE ANNUAL MEETING.

The annual meeting of the Kentucky State Medical Association for 1916 will be held at the Christian Church in Hopkinsville on October 25, 26 and 27. The first session of the House of Delegates will be on October 24. Those who have been in attendance at our annual meetings for the past several years will need no appeal to be present. The profession and people of Hopkinsville are making such social arrangements as will insure a delightful vacation for everyone. They expect every doctor in Kentucky to come this time and they ask us to especially invite those who have not heretofore been coming, as they feel sure that they can start the habit of attendance at the State meeting, in every physician who will come to Hopkinsville. The scientific program has been largely arranged by Dr. J. G. Gaither of Hopkinsville. It will be noted that there are fewer papers than usual and ample time will be given for discussions. The medical profession of Hopkinsville and Christian County is a unit in making such preparations for this meeting as will insure success. They deserve and ought to receive the support of not only every county society, but of every physician in Kentucky, in their efforts to break the records for meetings held away from Louisville. It is especially important that every member who attends secure a certificate from his local agent when he purchases his railroad ticket, and, if it is necessary for him to come over more than one line, that he secure a certificate from each agent, and in this way he can secure his return ticket for one-half fare plus fifty cents.

Hopkinsville has several good hotels. The Hotel Latham is one of the finest in the State. Reservations for rooms should be made at once. Those desiring to go to the other ho-

tels or private homes should write Dr. J. W. Harned of Hopkinsville, the secretary.

It is of interest that the people of Hopkinsville are as much alive to the entertainment of the doctors of the State as are the members of our own profession. Special committees of citizens have been appointed and everything is being done to make the meeting a pleasant and profitable one for every physician who attends.

RAILROAD RATES FOR THE HOPKINSVILLE MEETING.

The Kentucky State Medical Association will meet in Hopkinsville October 24, 25, 26, and 27. The House of Delegates alone will meet on the 24th. The scientific session will begin on the 25th. Delegates or members coming from Cincinnati, Ohio, Jellico, Tennessee, and all points in Kentucky, except on the O. & M., railroad, will be granted a reduction in their return fare from the meeting of one-half regular fare plus fifty cents, on the same route by which they go to Hopkinsville. In order to secure the reduction rate, it is necessary to get a certificate receipt from the agent when you leave your home station. If you do not get this certificate from your ticket agent you will not get a reduced fare for your return. If it is necessary for you to travel over more than one line of railroad to Hopkinsville, get a certificate receipt from each agent from whom you purchase a ticket, and you will get the reduced fare home. Certificate receipts can be procured three days before the meeting and can be secured on Tuesday, Wednesday and Thursday, October 24, 25, and 26. It is advised that all members arrange to leave for Hopkinsville so as to be there on Tuesday morning, and that the delegates arrange to arrive by noon on Monday.

BE SURE TO SECURE CERTIFICATE RECEIPT FROM THE TICKET AGENT

WHEN YOU PURCHASE YOUR TICKET TO HOPKINSVILLE. YOU CANNOT GET REDUCED RATE FOR YOUR RETURN TRIP WITHOUT DOING SO.

BUSINESS.

As has been the custom for many years, we publish in great detail the affairs of the Association as reflected in the reports of its officers, especially giving every item of expense and every step taken by them during the year. Have your resolutions, speeches and reports all ready for the House of Delegates. Ample time is given for any county society to instruct its delegates on any subject, and the delegate from any county society should confer with his fellows as to what should be done at this meeting. Every member is urged to read all of the reports. If anything is going wrong, the House of Delegates is the place to right it. The JOURNAL urges the membership to read every page of this issue so that they can take the intelligent interest in the Association's affairs that is essential to its continued success. You are all stock-holders in this great organization. It is in better shape in every way this year than ever before; but remember that it is your money that is being spent, your work being done, and if you are not familiar with every detail it is your fault and not the JOURNAL's, because everything that is going on is printed in it.

THE DISCUSSIONS.

The Kentucky State Medical Association is a democratic association where every man is his fellow's equal in opportunity, anyway. If you are interested in any subject on the program, which is printed in this issue, for the Hopkinsville session, and don't discuss it, it will be your own fault. When you have looked over the program, pick out the subject in which you are interested and write the secretary at once. Every paper on the program is, or soon will be, in print. A galley proof will be sent any member of any one paper. This will give you an opportunity of finding the views of the essayist and of deliberately and carefully preparing your discussion from your own experience and knowledge. If you prefer, write your discussion out and hand it to the stenographer just as you want it to appear in the JOURNAL. This plan has worked so well for the past several years that it is continued. Write to-day for the paper you wish to discuss.

OUR ADVERTISERS.

By this mail we are sending the following letter to one hundred selected firms:

"Twenty-five hundred members of this Association own and edit the KENTUCKY MEDICAL JOURNAL. It pays no salaries nor profits. Every cent of its income goes to make a bigger and better JOURNAL. For this reason, we can make a special appeal to advertisers. Our members know that the advertisers furnish the money which makes the JOURNAL a success. They know, furthermore, that the Association gives a positive guarantee of every advertisement in the JOURNAL and stands the financial loss by the subscribers on any advertised product or institution. Twenty-five hundred doctors get the JOURNAL and it is sometimes said to us that only medical supplies and similar articles should be advertised. More than seventeen hundred of these doctors have wives and children, however, and the whole family is interested in the KENTUCKY MEDICAL JOURNAL in a way that it is not in any other publication. We cordially invite you to try a few months and if it is not a success, we will be glad to square accounts without it costing you a cent. We do not want your money unless we can give you an adequate return for it, and we can only accept it for such of your wares as you are willing to absolutely guarantee as worth the money. You understand that we will not ask our readers to buy from you unless you furnish the best at the best price. But if you advertise with us, we will ask them to give you a fair chance to secure their patronage and you can rest assured that they will do it.

"The Cooperative Medical Advertising Bureau, 535 North Dearborn Street, Chicago, handles our advertising. Under separate cover, we are mailing you our September 1st JOURNAL and we are confident it will be worth your while to look into it."

It is up to you as to whether we make a success of the proposition. This is your JOURNAL and it will publish anything you have to say on any subject and if there is anything in its advertising or reading columns that you disagree with, it will publish your criticism, reasons or argument, and it cordially invites the attention of everyone of its readers and owners to every page it prints. You are one of the editors and are as much responsible for the articles published in it as anyone else save the man who writes them. The JOURNAL will be delighted to hear from you frequently. Our advertisers are anxious to know your wants and to satisfy your needs, and we can all help each other if we will all work heartily and work together.

THE COMMERCIAL EXHIBIT.

As a matter of course, the commercial exhibit will be better this year than it has been heretofore. Our members have responded so generously to our efforts to encourage our exhibitors that we have found this year that the exhibitors are responding even more gladly than they have ever done before. We are confident that if there were nothing else to be seen or heard in Hopkinsville except the commercial exhibits it would be worth the time and while to attend for their value alone. Only those firms can exhibit that are reputable and have something worth exhibiting. Instrument men, pharmacists, and everyone else having things of interest for physicians, including the long distance telephone, will be on hands to show you the very latest. Save your orders until you can see what you want.

THE CARDUI TRIAL.

The suit of the Chattanooga Medicine Company, the manufacturers of Wine of Cardui, against the American Medical Association resulted in a verdict of one cent and costs for the former. The controlling authorities of the American Medical Association consider this a moral victory although it was a technical defeat.

It is difficult to explain to those of our membership who were not present throughout the trial how it was possible for the jury to be in doubt as to the merits of the question involved in this suit. It was definitely shown that Wine of Cardui is composed of such of the extractives of thirty grains of thistle, or weed, known as *carduus benedictus*, or blessed thistle, and three grains of the black haw, or *viburnum prunifolium*, as would be withdrawn by a tablespoonful of a twenty per cent. solution of alcohol. Expressed in plain English and brushing aside the technicalities with which lawyers befuddle juries, this means that the only medicinal elements in this widely vaunted nostrum are the extractives from a worthless weed plus the slight valerianic odor obtained from the black haw, plus the forty-eight drops of alcohol in four times as much water. There can be no controversy amongst those who know as to the effects of such a preparation. Excluding alcohol, it is absolutely worthless for any purpose. Including alcohol, its only effect is that of a small high ball containing a teaspoonful and a half of whiskey and a dash of bitters. It is difficult to explain why this could not be made sufficiently clear for the jury to understand it. We trust that an appeal may be taken so that the matter may be presented in the higher courts before trained judges in such a way as to bring these facts out clearly. Nothing

more will be necessary to win the case, and nothing less will be satisfactory to the members of the American Medical Association. This JOURNAL insists that no stone shall be left unturned to secure a reversal of a verdict that was in violation of all facts of the case. Such a reversal can be secured if the case is handled by competent lawyers who are thoroughly acquainted with its merits.

We realize that the above statement rather gives the reason why we should have won a distinct verdict than why we were technically defeated. Had it been possible to hold the issue clearly to the above statements, and, in so far as the medical profession and the public health are concerned, these are all that amount to anything, it seems that we could not have helped winning. But the original article in the *Journal of the American Medical Association* went farther than this. They alleged a personal knowledge and guilt on the part of the manufacturers of Wine of Cardui, in regard to which no proof was submitted at the trial. Whether their allegations were true or false could not interest the court unless an attempt was made to prove them. This was the fundamental error which finally lost the case. There could not have been any question, or not much question, about the worthlessness of the medicine in the minds of the jury; but, from a careful investigation of all the evidence submitted, we feel that no evidence was submitted to sustain many of the most damaging statements in the original articles. The profession must understand that the cause of this defeat is here. In the future our investigations must be more complete before we make statements that will damage any man, or any man's business; we must be sure of our facts, and that we can prove them, or, at least, that we can submit such facts that the necessary inferences from them will prove our case. In the next place it is essential that all articles of controversial nature shall be submitted to competent lawyers. One has to sit throughout a trial of a case like this to realize how much, in the ordinary affairs of life, we must be guided by legal advice. It seems a natural inference to a doctor that a worthless medicine, advertised to cure a thing that no medicine will cure, is fraudulent. In common parlance this may be true, but in law only that is fraudulent which is done with the intent to deceive. If the man selling the medicine is so ignorant as to believe the things he says about it regardless of the truth or possibility, he is not committing a fraud, unless his claims are so extreme that every person in his natural mind would know they were untrue. This construction of the law would have been made clear to those in authority in Chicago by a competent law-

yer, if we had had one when the original articles were written. It is not fraudulent for a man to claim that a little high-ball with a dash of bitters could cure all degrees of prolapse or other displacements of the uterus and the same medicine would cure gonorrhoea in women and a number of other things which any competent doctor knows would be impossible; because, forsooth, the man is able to present depositions, however ridiculous, from a few hundred women and letters from a few thousand others, corroborated by the depositions of a hundred or more ignorant or venal doctors, who state that they believe the claims. The difficulty is that in court facts are only of value if they can be proven by an overwhelming preponderance of the evidence. In the Chicago case, extracts from several medical text books were read which were quite as absurd and far-fetched as the most exaggerated claim made by any patent medicine man.

To sum it all up, it is our opinion that the articles should not have been published as written and they would not have been so published had the Association submitted them to a lawyer who had any knowledge or comprehension of either the law or facts in the case. Regardless of the facts the proof was of a nature which could well confuse an even better jury than we had in Chicago. In parenthesis we will say that this was by far the best jury we have ever seen empaneled in a law suit. The facts, however, stood out so clearly through the evidence that the jury wrote its verdict for one cent and costs with the idea, unexpressed and probably unthought, that this would be a moral victory for honesty while a technical defeat for a poorly handled proposition, however honest.

Another phase of this question merits consideration by the profession and the public. At a considerable expense the people of the United States maintain in Washington the Bureau of Chemistry of the Department of Agriculture. Until within the past few years the activity of this Bureau had been such that many of the worthless class of patent medicines were excluded from interstate commerce, and this was beginning to make serious inroads into the income of the American Proprietary Association. During the past few years, however, the activities of this Bureau seem to have been guided by so timid a hand as to keep it from attacking anything but the little fellows. It is inexplicable that a Government Bureau presided over by competent men would permit such preparations as Wine

of Cardui and Tanlac and Lydia Pinkham's preparation and dozens of other similar ones that could be named to continue to be sold to credulous sick people or their anxious relatives. The officers of the Bureau know as well as we do the contents of these preparations. They know as well as we do their worthlessness for the purposes for which they are advertised, and yet, rather than incur the displeasure of the powerful forces which manufacture them, and do their duty by the people, they sit silently piling up page after page of investigations and are doing little else. If the law needs to be amended, let them say so, and the Congress will do it. However, every feature of the law has been upheld by the Federal Courts and it is high time that the profession and people of the United States awake to the fact that the Bureau of Chemistry is doing very much less of good than it should be doing and we should demand of our representatives in Congress that positive action be taken not only by the Chief of the Bureau but by the Solicitor of the Department and by such others as are charged with the responsibility for its work.

DR. J. H. LACKEY.

The sudden death in Nashville of Dr. J. H. Lackey recently was a shock to all who knew and loved him. Dr. Lackey spent the most of his busy life as a general practitioner at Canton in Trigg county. He was a successful physician. He made enough money to live well and to educate and train his family well; but far away and beyond this, he was a leader in his community. He always looked forward to better things for his people. Part of this he accomplished by keeping abreast of the times as their family physician. He not only led them at home, but as their representative in the General Assembly he showed that he was a natural leader of men. To him is due a large part of the organization and campaign which led to the creation of a modern State Board of Health in 1910. We feel that we are within the bounds in saying that this modest, quiet, country gentleman had saved the lives of thousands of people all over Kentucky and the profession and people all over the State will do well to honor and revere his memory now that he is gone.

To his devoted family and the thousands of friends who loved him the JOURNAL extends its sincere sympathy; and at the same time we desire to congratulate them that he stayed with them for so long a time.

THE ARMY REJECTIONS.

The rejection of approximately eighteen hundred of the forty-two hundred young men who desired to enlist in the United States Army at Fort Thomas deserves the thoughtful consideration of every citizen of Kentucky. It is to be remembered that almost as many men were rejected at their home stations by the officers before the various units were brought to Fort Thomas. The editor had the opportunity of seeing practically every man who was rejected. At first it was the natural apprehension on the part of many of the officers that red tape and technical regulations were responsible for many unnecessary rejections, but this was soon dispelled. Every recruit was first given a shower bath and was then weighed and his height and chest expansion were taken. Under regular army standards a man must weigh at least one hundred and twenty pounds, and his chest measurement must be thirty inches at expiration, and he must be five feet and four inches tall. Of course it is well known that there are many healthy men smaller than this, but it has been found in the army that the large majority of them are not able to keep up with the difficult requirements of army life. Comparatively few were rejected solely on this account. There were forty-one rejections for trachoma, something in the neighborhood of a hundred for acute gonorrhea, about thirty for acute syphilis, about three hundred and fifty for defective vision which was not correctible, one hundred for defective hearing, sixty for illiteracy, forty for hernia, twenty for tuberculosis, and one hundred and twenty for functional or organic heart disease. There were a very large number who were flat chested, round shouldered, under-developed men who were obviously unfit.

It is a fair statement that of the eighteen hundred rejections, less than two hundred were from conditions that were not preventable. If our school system were of any actual or potential value in the training of either boys or girls, eighty per cent. of these rejections would not have occurred. We are giving our children a smattering of information from a few text books and calling it education. We are teaching them practically none of the real problems that they must confront in their lives if they are to be valuable. Three fourths of the eighteen hundred rejections at Fort Thomas will be rejections in successful manhood elsewhere. Thoughtful men and women in and out of the teaching profession know this, and yet most of us are contented to sit idly by and do nothing but know it.

CRIMINAL ABORTION.

The Chairman of the Medico-Legal Committee has recently received a letter from one of the members of the State Association, accused of committing a criminal abortion, asking that he be defended in the courts. This relief was denied for two apparent reasons. It is against public policy for any organization to defend one of its members accused of having committed a crime. In the second place the Kentucky State Medical Association is anxious to see every doctor who commits a criminal abortion convicted and punished. It is difficult to convict these murderers as it is hard to catch them red-handed in their crimes, but it is the hope of the profession that any one of its members who is guilty will be caught and punished. Criminal abortion is all too frequent and the courts and people may well awaken to the necessity for drastic action in the matter.

SCIENTIFIC EDITORIALS.

BACTERIURIA AND PYURIA IN SKIN DISEASES.

It is quite common in the practice of dermatology to meet with dermatoses that are secondary to those faulty conditions usually recognized by examination of the urine, as, for example, nephritis, diabetes, kidney or bladder calculi, indicanuria, bacteriuria, pyuria, etc. The last two mentioned conditions, pyuria and bacteriuria, or bacilluria, as it is often called, are considered to be the same by many physicians, but this is not true. Although as a rule the distinction is a rather academic one, still there are cases which are one without being the other. In the majority of cases, when bacteria appear in the urine as it emerges from the urethra, before contamination from any extraneous source has occurred, the urine will also contain leucocytes or pus-cells, however a great many bacteria may pass through the kidney without apparently infecting the urinary tract, so that the urine will be free from pus-cells even though swarming with bacteria. Occasionally one finds this condition in the urine of pregnant women; usually one believes it to be due to contamination, but fresh specimens of urine drawn under most careful precautions per catheter and examined at once will show that the bacteria are in the urine when in the bladder at least and yet no leucocytes are admixed with them. On the other hand the urine may obtain quite an abundance of leucocytes and yet be sterile to culture and inoculation tests, nor show any microorganisms upon microscopical examination. For instance, after violent athletic exercises, especially long dis-

tance running, there may be more leucocytes per c.c. of urine than in a mild infection. Hypertrophy of the prostate may cause the appearance of a considerable number of leucocytes without bacteria. Irritation will produce the same condition, and it is not uncommon to find the urine fairly crowded with leucocytes when the sharp edged crystals of calcium oxalate have been cutting the lining cells of renal-tubules, ureters, bladder and urethra.

Unless care is taken to maintain constant technic used in securing the urinary sediment for microscopical examination there will be some difficulty in determining whether there is an excess of leucocytes and how great this excess is since normal urines contain leucocytes in small numbers.

The cause of bacteriuria can often be traced to insufficient emptying of the bladder due to hypertrophy of the prostate, obstruction by calculus, pregnancy, "pouching of the bladder" or cystocele, degeneration of the nerves controlling the muscles of the bladder-wall or sphincters, or even pure neurosis. Constipation seems to be an important factor, while hematogenous infection may occur from appendicitis, colitis, or enteroptosis. Violent straining and twisting efforts are conducive to hematogenous infection of the pelvis of the right kidney with germs from the intestinal tract, especially *B. Coli*. The tubercular infections usually arise in one or other of the kidneys from bacilli carried from some other focus of infection with the blood. In these cases of tubercular nephritis the infection travels down the ureter sooner or later to the bladder then up the other ureter to the other kidney, or the other kidney may be infected in the same way as the primary kidney, or hematogenous infection from lung, joint or other focus.

Pyuria often develops as an acute condition after a urethritis of pyogenic nature, and is especially found in adult females, men and children not so frequently suffering from it. There are many ways in which bacteria make their appearance in the urinary tract: (1) through the urethra: infection from a catheter, etc.; (2) by the lymphatics from the intestinal tract, and (3) hematogenous, particularly the streptococcal infection of the kidneys in acute articular rheumatism and tonsillitis. The main symptoms are traceable to the effect on the bladder, i.e., frequent urination, dysuria, incomplete emptying of the bladder, incontinence of urine and tenesmus, while the general symptoms are those accompanying sepsis anywhere in the body, i.e. headache, chills, fever, malaise, in children even convulsions. The urine is turbid, even when just passed, and this turbidity is not entirely cleared up when the urine is heated,

neither with acids or alkalies. The urine is usually slightly acid or alkaline, due to the alkalinizing effect of the bacteria. If the pyuria is due to infection of the kidney or kidney-pelvis the urine may have quite an acidity, but if the infection is in the bladder this is usually reduced to a low point, and the greater the retention of urine the more alkaline will be the reaction of the urine. The morning urine will show this more clearly than other specimens. In women it should be drawn by catheter, since otherwise it would be contaminated with vaginal secretions and the picture obscured. Frequently a perfectly normal urine will be so contaminated with desquamated epithelia, pathogenic and saprophytic bacteria and pus from the vagina that it will seem to be from a badly infected bladder. Urines which contain a considerable quantity of pus will often show a small quantity of albumen, the urea is apt to be diminished, traces of acetone occasionally present, indican may be absent or present in large amounts, and if the urine has stood some time in warm weather it may contain products of partial or complete digestion by the bacterial enzymes of the epithelial cells, aided by the liberated enzymes from the leucocytes and the autolytic ferments of the epithelial cells themselves. Microscopic examination will show many micro-organisms, motile or non-motile or a mixture of both, depending upon whether the infection is pure or mixed and whether the urine has become contaminated with organisms from the air, container, etc. Pus-cells are present in large numbers sometimes nothing can be seen but pus cells and bacteria; crystals of calcium oxalate are quite frequently found, while if the urine is alkaline or only faintly acid triple phosphates, ammonium urates, and other crystals are frequent. The nature of the infection is hard to determine in the ordinary specimen of urine, since it is usually contaminated in turn with germs from the penis or vagina, the chamber or bucket used for collecting, airborne germs which fall into the open vessel, the bottle and cork used for carrying the urine to the laboratory; all these stray forms must be ruled out, not to mention the difficulty of growing certain germs in the presence of the less delicate saprophytes. When drawn directly into a sterile container through a sterile catheter the determination of the infecting agent is much easier. With males it is usually sufficient to wash the external meatus with a sterilizing solution, such as 1-1000 mercuric chloride, or 2 per cent. solution aqueous phenol, and have them urinate directly into a bottle which has been boiled, cork and all, for some time. By staining with carbol-fuchsin and acid-alcohol one can determine readily whether one is dealing with

acid fast forms or not while Gram's stain will narrow the field even more. If the morphology and staining characteristics are insufficient for exact diagnosis cultures should be made; the mode of growth on gelatin, agar-slant, litmus-milk and glucose-agar will in nearly every case suffice for exact determination. The usual forms are bacilli coli, streptococci, staphylococci, gonococci, and bacillus typhosus, though the latter usually does not cause any symptoms which would call attention to the urine, its identification being more often occasioned in an effort at early diagnosis of typhoid fever. Other forms which are found include bacilli xerosis, bacilli proteus vulgaris, bacilli tuberculosis, pneumococcus, etc.

In regard to the treatment of dermatoses arising from such derangements of the urinary system we should rely mainly upon internal treatment. In those cases of infection with bacillus coli from the intestinal tract we should correct any constipation and sterilize the intestinal tract either with bacillus acidi lactici preparations or soured milk or with intestinal antiseptics, such as guaiacol carbonate, salol, beta naphthol, etc. Where the urine is acid or can be readily kept acid hexamethylamine or urotropin is an ideal remedy and if given a fair chance, i.e., for several weeks at least, will, in the majority of cases clear up the infection. Autogenous vaccines are indicated here, especially in the pyelitis and pyelonephritis of colon origin. Staphylococcal infections are only less numerous than colon infections; the treatment is much the same; autogenous vaccines and hexamethylamine, plenty of water by mouth and keep the urine acid. The same rules hold good for the other infections to a large extent with the exception of bacillus tuberculosis infections; here we should determine by cystoscopic examinations, palpation and functional examinations the condition of both kidneys and the bladder. If only one kidney is infected, nephrectomy is indicated; tubercular infection of the bladder requires local applications and strong solutions of guaiacol and iodoform with olive oil injected into the bladder through a catheter so that as little as possible of the fluid gets on the urethral wall, has been very successful in our experience. Where there is retention of urine in the bladder, irrigations are indicated until the cause of the retention has been removed and the bladder restored to something like normal condition. Removing the cause of the urinary retention may mean prostatectomy, repairing of cystocele, removal of bladder calculus, dilating a stricture, or any one of a number of operative procedures. Renal infections which take on the characteristics of acute nephritis should be treated from both

viewpoints: attempting to combat the infection and helping to spare the kidney as much as possible through increased elimination by bowels and skin, non-irritating foods and rest in bed.

After the infection has been overcome and this is determined by frequent microscopical examinations of the urine—an attempt should be made to prevent a recurrence, if possible. Where there has been a hematogenous infection due to constipation, appendicitis, or twisting of kidney-pelvis by violent gymnastic exercise, the patient should be warned to keep the bowels open, have the appendix removed or avoid twisting movements. When due to infection by sound or catheter greater care should be maintained in asepsis and antisepsis.

The dermatoses which appear in these conditions of bacteriuria and pyuria should receive proper local treatment, soothing, stimulating or merely protective, as indicated.

M. L. RAVITCH and S. A. STEINBERG.

OFFICIAL ANNOUNCEMENTS

PROGRAM OF THE GENERAL MEETING OF THE KENTUCKY STATE MEDICAL ASSOCIATION.

WEDNESDAY, OCTOBER 25, 1916—9 A. M.

Call to Order by the President....J. W. KINCAID, M. D.,
Catlettsburg
Invocation Rev. J. N. JESSUP, Hopkinsville
Address of Welcome for City of Hopkinsville
T. C. UNDERWOOD, Hopkinsville
Adresse of Welcome for Christian County Medical
Society H. C. BEAZLEY, M. D., Hopkinsville
Response to Address of Welcome
W. G. KINSOLVING, M. D., Eddyville
Installation of the President
Report of Committee on Arrangements
F. M. STITES, M. D., Chairman, Hopkinsville

SCIENTIFIC SESSION—10 TO 12 A. M.

Diabetes Mellitus, Cause and Treatment
C. W. DOWDEN, M. D., Louisville
Functional Heart Diseases: What Are They and
How Treated. B. B. KEYS, M. D., Murray
Training Physicians for Social Health Work.
P. E. BLACKERBY, M. D., Erlanger
Simple Modification of Milk for the Baby.
D. H. MCKINLEY, M. D., Winchester

SPECIAL ORDER AT 12 M.

Oration in Medicine E. A. STEVENS, M. D., Mayfield

WEDNESDAY AFTERNOON, OCTOBER 27.

SCIENTIFIC SESSION—2 P. M.

Non-Tubercular Infections of the Kidney
C. G. HOFFMAN, M. D., Louisville
Urinary Tuberculosis. CARL L. WHEELER, M. D., Lexington
Splenomegaly of Congenital Syphilis.
CHARLES A. VANCE, M. D., Lexington
Suppurative Ears: Their Relation to Life Insurance
Risks A. O. PFINGST, M. D., Louisville
Tuberculosis: Its Relation to Life Insurance Risks
WILLIAM R. THOMPSON, M. D., Mt. Sterling
Rational Management of Typhoid Fever
S. M. CROWE, M. D., Centertown
Tubercular Meningitis. ROWAN MORRISON, M. D., Louisville

THURSDAY MORNING, OCTOBER 26.

SCIENTIFIC SESSION—8:30 A. M.

Some Important Diagnostic Points the General
Practitioner Should Know About the Ear.
SELDON COHN, M. D., Fulton
Some Important Diagnostic Points the General
Practitioner Should Know About the Nose.
G. C. HALL, M. D., Louisville
Some Important Diagnostic Points the General

Practitioner Should Know About the Throat
 H. G. REYNOLDS, M. D., Paducah
 Forceps Delivery H. E. PRATHER, M. D., Hickman
 The Present Treatment of Puerperal Infection....
 J. B. LUKINS, M. D., Louisville
 The Indications for and Prognosis of Prostatectomy
 P. H. STEWART, M. D., Paducah

SPECIAL ORDER AT 12 M.

Oration in Surgery—Then and Now in Surgery...
 W. L. GAMBILL, M. D., Jenkins

THURSDAY AFTERNOON, OCTOBER 26.

SCIENTIFIC SESSION—2 P. M.

Expectorants: Mode of Action and Symptomatic Indications CARL NORFLEET, M. D., Somerset
 Existing and Needed Health and Medical Legislation in Kentucky J. G. SOUTH, M. D., Frankfort
 Significance of Abdominal Pain in Children.....
 JOHN D. TRAWICK, M. D., Louisville
 What Can the Internist Do For the Bile Tract?..
 W. A. JENKINS, M. D., Louisville
 The Indications for Cholecystectomy and Cholecystotomy IRVIN ARELL, M. D., Louisville
 Acute Bacterial Synovitis: Pathology and Treatment J. G. SHERRILL, M. D., Louisville
 Rheumatism from the Modern View Point
 S. J. MEYERS, M. D., Louisville
 Albee Method in Treating Pott's Disease, (with lantern slides) W. B. OWEN, M. D., Louisville

FRIDAY MORNING, OCTOBER 27.

SCIENTIFIC SESSION—9 A. M.

Pruritus: Its Causes and Treatment
 C. R. LANAHAN, M. D., Louisville
 The Home Treatment and Cure of Morphine and Opium Addicts: With a Tabulated Report of Fifty-two Cases..... JOHN A. SNOWDEN, M. D., Winchester
 Management and Diagnosis of Rectal Cancer (with lantern slides) G. S. HANES, M. D., Louisville
 Rectal Conditions from the General Practitioner's View Point C. R. GARR, M. D., Flemingsburg
 Excision and Immediate Closure Operation for Anorectal Fistula (with lantern slides)
 BERNARD ASMAN, M. D., Louisville
 Bony Ankylosis of Joints and Their Treatment....
 FRANK BOYD, M. D., Paducah
 Fractures In or Near Joints: Diagnosis and Treatment, (lantern slides).....
 A. D. WILLMOTH, M. D., Louisville
 A Plea for the Compulsory Examination of Students' Boarding Houses in our Colleges.....
 V. A. STILLEY, M. D., Benton

FRIDAY AFTERNOON, OCTOBER 27.

SCIENTIFIC SESSION—2 P. M.

The Detection of Early Pulmonary Tuberculosis...
 EVERETT MORRIS, M. D., Oak Forest, Illinois
 Lessons From the Life of a Doctor Incognito: An Appeal to Young Men J. W. CRENSHAW, M. D., Cadiz
 Advantages of Percy's Electric Cautey in Cancer,
 R. C. MCCORD, M. D., Lebanon
 Then and Now B. P. EARLE, M. D., Dawson
 Anterior Poliomyelitis
 J. N. MCCORMACK, M. D., Bowling Green

Toxicity of Rattlesnake Serum.—According to Welker and Marshall, rattlesnake venom injected intramuscularly into the same rattlesnake or into another rattlesnake is not toxic. Injected intraperitoneally into guinea-pigs and intramuscularly into pigeons, it appears to be less toxic than rabbit serum. Captivity of the rattlesnake seems to produce an abnormal condition of the blood that is unfavorable to blood clotting. The bile of the rattlesnake is not highly toxic for pigeons, nor has it any antitoxic action for rattlesnake venom.

Clean up the yard. Buy a good garbage can and every day place all refuse in this receptacle. Take pride in being neat and systematic. If everyone kept one's yard in a clean condition, towns would need no yearly "clean-up" campaigns.

OFFICIAL CALL

THE SIXTY-SIXTH ANNUAL SESSION
 OF THE KENTUCKY STATE MEDICAL ASSOCIATION TO BE HELD
 IN HOPKINSVILLE, OCTOBER
 24, 25, 26 and 27, 1916.

To the Officers and Members of the Component County Societies of the Kentucky State Medical Association:

The Sixty-sixth Annual Session of the Kentucky State Medical Association will convene in the Auditorium of the Christian Church, Hopkinsville, Kentucky, on Wednesday, Thursday and Friday, October 25, 26 and 27, 1916.

THE HOUSE OF DELEGATES.

The House of Delegates of the Kentucky State Medical Association will convene in the Christian Church on Tuesday, October 24, 1916, at 2 p. m.

FIRST GENERAL SESSION.

The First General Session which constitutes the opening exercises of the Scientific functions of the Association, will be held in the Auditorium of the Christian Church, Hopkinsville, Kentucky, at 9 a. m. Wednesday, October 25, 1916.

THE COUNCIL.

The Council will convene in the parlors of the Latham Hotel at 11 a. m., Tuesday, October 24, 1916.

THE REGISTRATION DEPARTMENT.

The Registration Department will be opened in the Exhibit Hall, on the main floor of the Christian Church from 10 a. m., to 7 p. m., on Tuesday, October 24, 1916; from 8 a. m., to 7 p. m., Wednesday and Thursday, October 25 and 26th, and from 8 a. m., to 11:30 p. m., on Friday, October 27th.

APPORTIONMENT.

Each chartered component county society will be entitled to the number of delegates opposite its name on the following list. Each society is entitled to one delegate for each twenty-five members, or major fraction thereof, whose dues have been paid to the State Association in accordance with the By-Laws:

Adair	1	Laurel	1
Allen	1	Lawrence	1
Anderson	1	Lee	1
Ballard	1	Leslie	1
Barren	1	Letcher	1
Bath	1	Lewis	1
Bell	1	Lincoln	1
Boone	1	Livingston	1
Bourbon	1	Logan	1
Boyd	1	Lyons	1
Boyle	1	McCracken	2
Bracken	1	McCreary	1
Breathitt	1	McLean	1
Breckinridge	1	Madison	1
Bullitt	1	Marion	1
Butler	1	Magoffin	1
Caldwell	1	Marshall	1
Calloway	1	Martin	1
Campbell-Kenton	4	Mason	1
Carroll	1	Meade	1
Carlisle	1	Menifee	1
Carter	1	Mercer	1
Cassey	1	Metcalfe	1
Christian	2	Monroe	1
Clay	1	Montgomery	1
Clinton	1	Morgan	1
Crittenden	1	Muhlenburg	1
Cumberland	1	Nelson	1
Daviess	3	Nicholas	1
Elliot	1	Oldham	1
Estill	1	Ohio	1
Fayette	3	Owsley	1
Fleming	1	Owen	1
Floyd	1	Pendleton	1
Franklin	1	Perry	1
Fulton	1	Pike	1
Garrard	1	Powell	1
Gallatin	1	Pulaski	1
Grant	1	Robertson	1
Graves	1	Rockcastle	1
Grayson	1	Rowan	1
Green	1	Russell	1
Greenup	1	Scott	1
Hancock	1	Shelby	1
Hardin	1	Simpson	1
Harlan	1	Spencer	1
Harrison	1	Taylor	1
Hart	1	Todd	1
Henderson	2	Trigg	1
Henry	1	Trimble	1
Hickman	1	Union	1
Hopkins	1	Warren	2
Jackson	1	Washington	1
Jessamine	1	Wayne	1
Jefferson	9	Webster	1
Johnson	1	Whitley	1
Knott	1	Wolfe	1
Knox	1	Woodford	1
Larue	1		

1916 OFFICERS.

DR. J. W. KINCAID, Catlettsburg, President.	
DR. J. B. MASON, London	} Vice Presidents
DR. A. W. DAVIS, Morton's Gap	
DR. M. E. HOGE, Quicksand	
DR. W. B. MCCLURE, Lexington, Treasurer.	
DR. A. T. MCCORMACK, Bowling Green, Secretary.	

COUNCILORS.

DR. E. RAU, Bowling Green, Chairman.
DR. W. W. RICHMOND, Clinton.
DR. CYRUS GRAHAM, Henderson.
DR. C. Z. AUD, Cecilian.
DR. C. W. HEBBITT, Louisville.
DR. R. C. MCCORD, Lebanon.
DR. A. W. CAIN, Somerset.
DR. J. E. WELLS, Cynthiaana.
DR. A. S. BRADY, Greenup.
DR. I. A. SHIRLEY, Winchester.
DR. J. S. LOCK, Barbourville.

Representative on Legislative Council, American Medical Association W. A. POOLE, Henderson

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION. KENTUCKY.

CARL L. WHEELER	Lexington
W. W. RICHMOND	Clinton
MILTON BOARD	Louisville
A. T. MCCORMACK	Bowling Green

MEMBERS OF STATE BOARD OF HEALTH.

DR. JOHN G. SOUTH, President	Frankfort
DR. C. A. FISH	Frankfort
DR. W. W. RICHMOND	Clinton
DR. O. C. ROBERTSON	Owensboro
DR. CHARLES Z. AUD, ...	Cecilian

DR. I. A. SHIRLEY	Winchester
DR. GEO. T. FULLER	Mayfield
DR. A. T. MCCORMACK, Secretary	Bowling Green
DR. J. N. MCCORMACK, State Sanitary Inspector	Bowling Green
DR. D. P. CURRY, State Sanitary Engineer and Chemist	Bowling Green
DR. W. L. HEIZER, State Registrar of Vital Statistics	Bowling Green
DR. LILLIAN H. SOUTH, State Bacteriologist	Bowling Green

PERMANENT COMMITTEES.

Scientific Work: J. G. Gaither and A. T. McCormack.

The Medico-Legal Committee consists of J. J. Moren, Chairman; W. B. McClure, and A. T. McCormack, Secretary.

Legislation and Public Policy: C. Z. Aud, D. M. Griffith and Milton Board.

Medical Education: W. W. Richmond, Fayette Dunlap and C. A. Calvert.

Expert Testimony: J. N. McCormack, Curran Pope, and J. L. Phythian.

Preventable Diseases of the Eye: J. A. Stucky, R. I. Collins, and C. W. Kavanaugh.

COUNCILOR DISTRICTS.

FIRST DISTRICT.

BALLARD	FULTON	LYON
CALDWELL	GRAVES	MARSHALL
CALLOWAY	HICKMAN	MCCracken
CARLISLE	LIVINGSTON	TRIGG

SECOND DISTRICT.

BRECKINRIDGE	HENDERSON	OHIO
CRITTENDEN	HOPKINS	UNION
DAVISS	MCLEAN	WEBSTER
HANCOCK	MUHLBURG	

THIRD DISTRICT.

ALLEN	CUMBERLAND	WARREN-EDMONSON
BARREN	LOGAN	SIMPSON
BUTLER	METCALFE	TODD
CHRISTIAN	MARION	

FOURTH DISTRICT.

BULLITT	HENRY	SHELBY
GRAYSON	LARUE	OLDHAM
HARDIN	MEADE	NELSON
HART		

FIFTH DISTRICT.

ANDERSON	FRANKLIN	OWEN
BOONE	GALLATIN	SPENCER
CARROLL	JEFFERSON	

SIXTH DISTRICT.

ADAIR	GREEN	TAYLOR
BOYLE	MERCER	WASHINGTON
MARION		

SEVENTH DISTRICT.

CASEY	LINCOLN	RUSSELL
CLINTON	PULASKI	WAYNE
GARRARD	ROCKCASTLE	MCCREARY

EIGHTH DISTRICT.

BOURBON	HARRISON	PENDLETON
BRACKEN	JESSAMINE	ROBERTSON
CAMPBELL-KENTON	MASON	SCOTT
FLEMING	NICHOLAS	WOODFORD
GRANT		

NINTH DISTRICT.

BOYD	JOHNSON	MAGOFFIN
CARTER	LEWIS	MARTIN
ELLIOTT	LAWRENCE	PIKE
FLOYD		

TENTH DISTRICT.

BATH	LEE	OWSLEY
BREATHITT	LETCHER	PERRY
CLARK	MADISON	POWELL
ESTILL	MENIFEE	ROWAN
FAYETTE	MONTGOMERY	WOLFE
KNOTT		

ELEVENTH DISTRICT.

BELL	JACKSON	LESLIE
CLAY	KNOX	WHITLEY
HARLAN	LAUREL	

CONSTITUTION AND BY-LAWS OF THE
KENTUCKY STATE MEDICAL AS-
SOCIATION ADOPTED AT PA-
DUCAH IN 1902 AS
AMENDED.

CONSTITUTION.

ARTICLE I.—NAME OF THE ASSOCIATION.

The name and title of this organization shall be the Kentucky State Medical Association.

ARTICLE II.—PURPOSE OF THE ASSOCIATION.

The purpose of the Association shall be to federate and bring into one compact organization the entire medical profession of the State of Kentucky, and to unite with similar associations in other states to form the American Medical Association, with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES.

Component Societies shall consist of those county medical societies which hold charters from this Association.

ARTICLE IV.—COMPOSITION OF THE ASSOCIATION.

Section 1. This Association shall consist of Members, Delegates and Guests.

Sec. 2. MEMBERS. The members of this Association shall be the members of the component county medical societies.

Sec. 3. DELEGATES. Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component county societies in the House of Delegates of this Association.

Sec. 4. GUESTS. Any distinguished physician not a resident of this State may become a guest during any Annual Session upon invitation of the Association or its Council, and shall be accorded the privileges of participating in all of the scientific work of that Session.

ARTICLE V.—HOUSE OF DELEGATES.

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1), Delegate elected by the component county societies, and (2) *ex officio*, the officers of the Association as defined in Article VII, Section 1, of this Constitution.

ARTICLE VI.—SECTIONS AND DISTRICT SOCIETIES.

The House of Delegates may provide for a division of the scientific work of the Association into appropriate Sections, and for the organization of such Councilor District Societies as will promote the best interest of the profession, such societies to be composed exclusively of members of component county societies.

ARTICLE VII.—SESSIONS AND MEETINGS.

Section 1. The Association shall hold an Annual Session, during which there shall be held daily not less than two General Meetings, which shall be open to all registered members, delegates and guests.

Sec. 2. The time and place for holding each Annual Session shall be fixed by the House of Delegates.

ARTICLE VIII.—OFFICERS.

Section 1. The officers of this Association shall be a President, three Vice Presidents, a Secretary, a Treasurer, and eleven Councilors.

Sec. 2. The President and Vice Presidents shall be elected for a term of one year. The Secretary, Treasurer and Councilors shall be elected for terms of five years each, the Councilors being divided into classes so that two shall be elected each year. All of these officers shall serve until their successors are elected and installed.

Sec. 3. The Officers of the Association shall be elected by the House of Delegates on the morning of the last day of the Annual Session, but no Delegate shall be eligible to any office named in the preceding section, except that of Councilor, and no person shall be elected to any such office who is not in attendance upon the Annual Session and who has not been a member of the Association for the past two years.

ARTICLE IX.—FUNDS AND EXPENSES.

Funds for meeting the expenses of the Association shall be arranged for by the House of Delegates by an equal per capita assessment upon each county society to be fixed by the House of Delegates, by voluntary contribution, and from the profits of its publication. Funds may be appropriated by the

House of Delegates to defray the expenses of the Annual Session, for publication, and for such other purposes as will promote the welfare of the Association and profession.

ARTICLE X.—REFERENDUM

The General Meeting of the Association may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may, by a similar vote of its own members, or after a like vote of the General Meeting, submit any such question to the membership of the Association for a final vote; and if the persons voting shall comprise a majority of all the members, a majority of such vote shall determine the question and be binding upon the House of Delegates.

ARTICLE XI.—THE SEAL.

The Association shall have a common Seal with power to break, change or renew the same at pleasure.

ARTICLE XII.—AMENDMENTS.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at that Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session and that it shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

BY-LAWS.

CHAPTER I.—MEMBERSHIP.

Section 1. All members of the Component County Societies shall be privileged to attend all meetings and take part in all of the proceedings of the Annual Sessions, and shall be eligible to any office within the gift of the Association. PROVIDED, that no physician may become a member of any county society unless he signs and keeps inviolate the following pledge.

I hereby promise upon my honor as a gentleman that I will not so long as I am a member of the Kentucky State Medical Association practice division of fees in any form; neither by collecting fees from others referring patients to me; nor by permitting them to collect my fees for me; nor will I make joint fees with physicians or surgeons referring patients to me for operation or consultation; neither will I in any way, directly or indirectly, compensate anyone referring patients to me; nor will I utilize any man as an assistant as a subterfuge for this purpose.

Sec. 2. The name of a physician upon the properly certified roster of members, or list

of delegates, of a chartered county society which has paid its annual assessment, shall be *prima facie* evidence of his right to register at the annual session in the respective bodies of this Association.

Sec. 3. No person who is under sentence of suspension or expulsion from any component society of this Association, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings, until such time as he has been relieved of such disability.

Sec. 4. Each member in attendance at the Annual Session shall enter his name on the registration book, indicating the component society of which he is a member. When his right of membership has been verified by reference to the roster of the society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member or delegate shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE ASSOCIATION.

Section 1. The Association shall hold an annual session, meeting every third year in the city of Louisville, and the other two years at some point in the State fixed at the preceding annual session.

Sec. 2. Special sessions of either the Association or House of Delegates shall be called by the President at his discretion or upon petition of twenty delegates.

CHAPTER III.—GENERAL MEETING.

Section 1. The General Meeting shall include all registered members, delegates and guests, who shall have equal rights to participate in the proceedings and discussions; and, except guests, to vote on pending questions. Each General Meeting shall be presided over by the President or in his absence or disability, or upon his request, by one of the Vice-Presidents. Before it, at such time and place as may have been arranged, shall be delivered the annual address of the President and the annual orations, and the entire time of the Sessions as far as may be shall be devoted to papers and discussions relating to scientific medicine.

Sec. 2. The General Meeting shall have authority to create committees or commissions for scientific investigations of special interest and importance to the profession and public, and to receive and dispose of reports of the same; but any expense in connection therewith must first be approved by the House of Delegates.

Sec. 3. Except by special vote, the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed.

Sec. 4. No address or paper before the Association, except those of the President and Orators, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject.

Sec. 5. All papers read before the Association shall be its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

CHAPTER IV.—HOUSE OF DELEGATES.

Section 1. The House of Delegates shall meet annually at the time and place of the Annual Session of the Association and shall so fix its hours of meeting as not to conflict with the first General Meeting of the Association, or with the meeting held for the address of the President and the annual orations, and so as to give delegates an opportunity to attend the other scientific proceedings and discussions so far as is consistent with the duties. But if the business interests of the Association and profession require, it may meet in advance or remain in session after the final adjournment of the General Meeting.

Sec. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every 25 members, and one for each major fraction thereof, but each county society holding a charter from this Association, which has made its annual report and paid its assessment as provided in this Constitution and By-Laws, shall be entitled to one delegate. In case the regularly elected delegate is unable to attend the annual meeting of the Association, the President of the county society shall have the power to appoint an alternate, who shall have the rights and privileges of a delegate.

Sec. 3. A majority of the registered delegates shall constitute a quorum, and all of the meetings of the House of Delegates shall be open to members of the Association.

Sec. 4. It shall, through its officers, Advisory Council, and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each annual session a stepping stone to further ones of higher interest.

Sec. 5. It shall consider and advise as to the material interest of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and en-

force all proper medical and public-health legislation, and to diffuse popular information in relation thereto.

Sec. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality and shall continue these efforts until every physician in every county of the State who can be made reputable has been brought under medical society influence.

Sec. 7. It shall encourage post-graduate work in medical centers as well as home study and research and shall endeavor to have the results of the same utilized and intelligently discussed in the county societies. With these ends in view, five years after the adoption of the By-Laws no voluntary paper shall be placed upon the annual program or be heard in the Association which has not first been heard in the county society of which the author is a member.

Sec. 8. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body in such a manner that not more than one-half of the delegates shall be elected in any one year.

Sec. 9. It shall upon application provide and issue charters to county societies organized to conform to the spirit of the Constitution and By-Laws.

Sec. 10. In sparsely settled sections it shall have authority to organize the physicians of two or more counties to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies and these societies, when organized and chartered shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately.

Sec. 11. It may divide the counties of the State into Councilor Districts, and, when the best interests of the Association and profession will be promoted thereby, organize in each district a medical society, to meet midway between the Annual Sessions of the Association, and members of the chartered county societies and none others shall be members in such district societies. When so organized from the Presidents of such district societies shall be chosen the Vice Presidents of this Association, and the Presidents of the county societies of the district shall be the Vice-Presidents of such district societies.

Sec. 12. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates, and such committees may report to the House of Delegates in person, and may participate in the debate therein.

Sec. 13. It shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

Sec. 14. It shall present a summary of its proceedings to the last general meeting of each annual session, and shall publish the same in the JOURNAL.

CHAPTER V.—ELECTION OF OFFICERS.

Section 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect, provided, however, that when there are more than two nominees, the nominee receiving the least number of votes on the first ballot shall be dropped and the balloting continue until an election occurs in like manner.

Sec. 2. Any member known to have directly or indirectly solicited votes for or sought any office within the gift of this Association shall be ineligible for any office for two years.

Sec. 3. The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the General Session.

Sec. 4. Nominations for President shall be called for by counties.

CHAPTER VI.—DUTIES OF OFFICERS.

Section 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for; shall deliver an annual address at such time as may be arranged; shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and so far as practicable, shall visit by appointment, the various sections of the State and assist the Councilors in building up the county societies and in making their work more practical and useful.

Sec. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of his death, resignation or removal, the Council shall elect one of the Vice-Presidents to succeed him.

Sec. 3. The Treasurer shall give bond for the trust imposed in him whenever the House of Delegates shall deem it requisite. He shall

demand and receive all funds due the Association, together with the bequests and donations. He shall, under the direction of the House of Delegates, sell or lease any estate belonging to the Association, and execute the necessary papers; and shall, in general, subject to such direction, have the care and management of the fiscal affairs of the Association. He shall pay money out of the Treasury, only on a written order of the President, countersigned by the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands.

Sec. 4. The Secretary, acting with the Committee on Scientific Work, shall prepare and issue the programs for and attend all meetings of the Association and of the House of Delegates and he shall keep minutes of their respective proceedings in separate record books. He shall charge upon his books the assessments against each component county society at the end of the fiscal year; he shall collect and make proper credits for the same, and perform such other duties as may be assigned to him. He shall be custodian of all record books and papers belonging to the Association, except such as properly belong to the Treasurer and shall keep account of and promptly turn over to the Treasurer all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. He shall keep a card-index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the county societies and in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall act as secretary of the Committee on Scientific Work. He shall be editor of the KENTUCKY MEDICAL JOURNAL. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary may be enabled to give that amount of time to his duties which will permit of his becoming proficient it is desirable that he shall receive some compensation. The amount of his salary shall be fixed by the House of Delegates.

CHAPTER VII.—COUNCIL.

Section 1. The Council shall hold daily meetings during the annual session of the Association and at such other times as necessity may require, subject to the call of the Chairman or on petition of three Councilors. It shall meet on the last day of the annual session of the Association for re-organization and for the outlining of the work for the ensuing year. At this meeting it shall elect a Chairman and Secretary and it shall keep a permanent record of its proceedings. It shall, through its Chairman, make an annual report to the House of Delegates at such times as may be provided, which report shall include an audit of the accounts of the Secretary and Treasurer and other agents of this Association, and shall also specify the character and cost of all the publications of the Association during the year, and the amount of all other property belonging to the Association or under its control, with such suggestions as it may deem necessary. In the event of a vacancy in any office the Council may fill the same until the next annual election.

Sec. 2. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his doings, and of the condition of the profession of each county in his district to each annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates upon a proper itemized statement, but this shall not be construed to include his expense in attending the annual session of the Association.

Sec. 2. Collectively the Council shall be the Board of Censors of the Association. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a county society, upon which an appeal is taken from the decision of an individual Councilor. Its decision in all such cases shall be final.

Sec. 4. The Council shall have the right to communicate the views of the profession and of the Association in regard to health, sanitation and other important matters to the

public and the lay press. Such communications shall be officially signed by the chairman and secretary of the Council, as such.

Sec. 5. The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association, and shall have authority to appoint such assistants to the editor as it deems necessary. It shall manage and conduct the KENTUCKY MEDICAL JOURNAL, which is the organ of the Association, and all money received by the JOURNAL, the Council or any officer of the Association, shall be paid to the Treasurer of the Association on the first of each month.

Sec. 6. All reports on scientific subjects and all scientific discussions and papers heard before the Association shall be referred to the KENTUCKY MEDICAL JOURNAL for publication. The editor, with the consent of the Councilor for the District in which he resides may curtail or abstract papers or discussions, and the Council may return any paper to its author which it may not consider suitable for publication.

Sec. 7. All commercial exhibits during the annual session shall be within the control and direction of the Council.

CHAPTER VIII.—COMMITTEES.

Section 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Medical Education.

A Medico-Legal Committee.

A Committee on Arrangements, and such other committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided.

Sec. 2. The Committee on Scientific Work shall consist of three members of which the President-elect shall be a member and Chairman, and the Secretary shall be a member and Secretary, and shall determine the character and scope of the scientific proceedings of the Association, subject to the provisions or the instructions of the House of Delegates or of the Association, or to the provisions of the Constitution and By-Laws. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented, which shall be adhered to by the Association as nearly as practicable.

Sec. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary. Under the direction of the House of Delegates it shall represent the Association in securing the enforcing legislation in the interest of the public health and scientific medicine. It

shall keep in touch with the professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall utilize every organized influence in local, state and national affairs and elections. Its work shall be done with dignity becoming a great profession and with that wisdom which will make effective its work and influence. It shall have authority to be heard before the entire Association upon questions of great concern at such times as may be arranged during the annual session.

Sec. 4. The Committee on Arrangements shall consist of the component society in the territory in which the annual session is to be held. It shall, by committees of its own selection, provide suitable accommodations for the meeting-places of the Association and of the House of Delegates, and of their respective committees, and shall have general charge of all arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

Sec. 5. The Medico-Legal Committee shall consist of three members, one of whom, the Chairman, shall be elected by the Council for five years, and the Secretary and Treasurer shall be the other two members *ex officio*. This committee shall select and fix the compensation for an attorney, who shall act as General Counsel, and, if required, additional local counsel. The Association through this Committee shall defend its members who are in good standing against unjust suits for malpractice.

CHAPTER IX.—ASSESSMENTS AND EXPENDITURES.

Section 1. The assessment of three dollars per capita on the membership of the component societies is hereby made the annual dues of this Association. The Secretary of each county society shall forward its assessment together with its roster of all officers and members, lists of delegates, and list of non-affiliated physicians of the county to the Secretary of this Association on the first day of January in each year.

Sec. 2. Any county society which fails to pay its assessment, or make the reports required, on or before the first day of April in each year, shall be held as suspended, and none of its members, or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

Sec. 3. All motions or resolutions appropriating money, shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Council and House of Delegates.

CHAPTER X.—RULES OF CONDUCT.

The principles set forth in the Principles of Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

CHAPTER XI.—RULES OF ORDER.

The deliberations of this Association shall be governed by parliamentary usage as contained in Robert's Rules of Order, unless otherwise determined by a vote of its respective bodies.

CHAPTER XII—COUNTY SOCIETIES.

Section 1. All county societies now in affiliation with the State Association or those that may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, upon application to the House of Delegates, receive a charter from and become a component part of this Association.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

Sec. 3. Charters shall be issued only upon approval of the House of Delegates and shall be signed by the President and Secretary of this Association. The House of Delegates shall have authority to revoke the charter of any component county society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 4. Only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the Councilor for the District if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be had to the Council, which shall decide what action shall be taken.

Sec. 5. Each county society shall judge of the qualification of its own members, but, as such societies are the only portals to this Association, every reputable and legally registered physician who is practicing, or who will agree to practice, non-sectarian medicine shall be entitled to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

Sec. 6. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council, which, upon a majority, may permit him to become a member of an adjacent county society.

Sec. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a Board and as individual councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 8. When a member in good standing in a component society moves to another county in this State, his name, upon request, shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

Sec. 9. A physician living on or near a county line may hold membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

Sec. 10. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material conditions of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Sec. 11. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall be especially encouraged to do post-graduate and original research work, and to give the society the first benefit of such labors. Official position and other preferences shall be unstintingly given to such members.

Sec. 12. At the time for the annual election of officers each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association in the proportion of one delegate to each twenty-five members or major fraction thereof, and the secretary of the society shall send a list of such delegates to the Secretary of this Association at least sixty days before the annual session.

Sec. 13. The Secretary of each county society shall keep a roster of its members, and a list of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be

deemed necessary. He shall furnish an official report containing such information, upon blanks supplied him for the purpose, to the Secretary of this Association, on the first day of January of each year, or as soon thereafter as possible, and at the same time that the dues accruing from the annual assessment are sent in. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Sec. 14. The Secretary of each county society shall report to the KENTUCKY MEDICAL JOURNAL full minutes of each meeting and forward to it all scientific papers and discussions which the Society shall consider worthy of publication.

CHAPTER XIII.—AMENDMENTS.

These By-Laws may be amended by any annual session by a two-thirds vote of all the delegates present at that session, after the amendment has laid upon the table for one day.

REPORT OF THE COUNCIL.

To the House of Delegates:

In accordance with the provisions of the Constitution and By-Laws, we have the honor of submitting this, our annual report:

On the day on which this report is written there are some fifty less members who have paid their dues than had done so a year ago. I regret that this does not mean that we have less members but that we have less members in good standing. It is a constant matter of regret that a considerable number of our physicians let their membership lapse, do not receive the JOURNAL, do not receive any protection in malpractice suits, do not get any of the benefits of the State organization, and are consequently dissatisfied and form the majority of the "Knockers" who are found in every organization. It would be better for the State Association if these men could be dropped from membership entirely. We need active, efficient work and workers. There are less than five hundred doctors in Kentucky who are not connected with the organization. Many of these are comparatively recent graduates who have not been properly trained as to the importance of professional association and organization. It is especially to be emphasized that these men are not eligible to reciprocity with the states with which we have reciprocal relations. No state wants the doctors who are not sufficiently interested in medical society work to keep in good standing

in their own county organizations. It is a matter of regret that Kentucky has to keep them.

More county societies are doing actual work than ever before. Many of those who have heretofore done well are doing still better. The vital statistics reports for the first six months in the year show that there was not a death from typhoid fever in the city of Newport. This is directly due to the activities of the Campbell-Kenton County Medical Society and the intelligent interest they have stirred up amongst the people. It can be duplicated in any county in the State by similar intelligent, effective effort. We still have many counties whose societies are even yet paper organizations, the individual physicians in these jurisdictions are still marking time, barely realizing, if at all, that they are members of a great profession. Such men do not realize what they miss in society meetings in the attrition of mind against mind and the opportunity of helplessness that comes from doing real things and real work together.

It is with much pleasure that we report that the net profit for the JOURNAL for the current year was \$1,177.99. We regret that we have not been able to make a working arrangement with the Jefferson County Medical Society by which all of its proceedings could be published regularly and with such an arrangement as would indicate that it comes from one of the greatest medical societies in the country. We are pleased, however, that we have been able to publish every paper and discussion sent in by that society within a month following the receipt. This society is not only much our largest, furnishing as it does about one-sixth of the total membership in the State, but it meets so regularly, has such a high average of membership, and is able to conduct its scientific work in such a way as to make it so available for publication, that the orderly printing of its proceedings is of the greatest importance in many ways. The profession in Louisville can look with becoming pride to the leadership it has held in State and National medical matters for the past seventy-five years. Past performances, however, will not avail them unless, like their medical forbears, they are willing to work and make sacrifices for the whole profession. To maintain this leadership it is essential for them not only to remain abreast of medical progress but they must demonstrate to their fellows elsewhere that they are worthy of leadership. It is within our personal knowledge that the scientific work of the Jefferson County Medical Society is of the first order of excellence. We regret that the Association has not sufficient income to enable it to publish the full proceedings of the Jefferson County Medical Society without its bearing

a part of the expense, for this would be an injustice to the five sixths of the membership outside of that society. This matter has been pending for eighteen months and we would urge that some equitable arrangement be made so that the JOURNAL and the Jefferson County Medical Society may both have the benefit of the full scientific proceedings of the weekly meetings held in Louisville.

It is interesting to note that the treasurer reports a net cash balance of \$5,407.79 this year as against \$5,983.70 last year. The total assets of the Association on September 1st, 1916, are \$8,500.25 as against \$8,140.64 last year. It will be noted from the report that the Council has invested an additional one thousand dollars in a first mortgage, five-year, real estate bond bearing six per cent. interest.

We desire to congratulate the Association upon the very effective work of the Medico-Legal Committee. Its total expense for the current year has been \$2,275.63, an increase of \$200 over last year, but this work is still practically self-sustaining. Dr. Moren's detailed report will be found of great interest and should be read by every member of the Association. It is to be regretted that his valuable report at the meeting of the House of Delegates can not be heard by every member of the Association. It is always so full of valuable advice and if his advice to the members could be accepted by all of them, there would be no more malpractice suits in Kentucky. It is of the utmost importance that our members should understand the increased dangers of malpractice suits and govern themselves accordingly. Now that all such suits must be brought within one year the Association should refuse to defend any counter suit where a suit is brought upon a fee bill within a year. Practically all of the malpractice suits this year have been against general practitioners. This has been one of the revelations brought about by the activities of the Medico-Legal Committee as it was formerly supposed that it was the specialists who were generally the victims of this form of blackmail. We now know that it is the successful general practitioner against whom most such suits are filed. The Council cordially commends the activity, wisdom and general effectiveness which has been shown by our Medico-Legal Committee and our general counsel, Hon. Fred Foreht, in the conduct of the important matters coming under their jurisdiction.

The net profit of \$1,177.99 for the JOURNAL for the current year is a matter of considerable pride, we feel sure, to the entire membership. Sometimes we believe every doctor in Kentucky realizes the value of the JOURNAL to our membership and we feel sure that we have demonstrated that a medical journal

may be conducted honestly and at the same time profitably. We have tried to keep constantly before our membership and the income of the JOURNAL indicates that in this we have been successful, that this remarkable showing can not be continued without an even more effective support of our advertisers in the future, by the profession of the State. This statement is repeated from our report of last year, for the sake of additional emphasis. It is not a square deal for our members who are the owners of the JOURNAL and who get all the good there is in it not to give our advertisers at least an equal opportunity. When one is purchasing something, he is urged to at least write to the advertisers in the JOURNAL and if he cannot give the best quality and the best price, that is his fault and not ours, but it is certainly up to us to give him an opportunity to do business with us, if he helps us to run a creditable JOURNAL. The importance of this to the individual member is emphasized by the fact that there is not a single firm among our advertisers which is not worthy of patronage, we stand ready to make good any money lost by one of our members, occasioned by a misstatement from any of our advertisers. So far as we know, no other medical or any other publication has ever made this practical guarantee of its advertisers. We accept no dishonest advertisers in our JOURNAL, and after five years' experience, we feel confident that our methods are perfected to a point where we will not be deceived, and are willing to relieve our members of risk in dealing with our advertisers and our advertisers products. If all of our members will adopt a plan already in force in many societies, of not only preferring those manufacturers and, sanitariums which make their announcements through our own JOURNAL, but of calling the attention of all those who seek the patronage of the profession to the fact, we will not only have no difficulty in furnishing our members with a satisfactory organ, but within a few years we can develop a sufficient reserve fund to undertake the protection of aged physicians and such other things as have been the dreams of our profession.

At the meeting of the Council in Newport two years ago, the contract for printing the Journal was let to the Times-Journal Publishing Company, incorporated, for two years on the following contract:

This contract made and entered into by the Kentucky State Medical Association, incorporated, party of the first part, and the Times-Journal Publishing Company, incorporated, party of the second part, witnesseth:

That the party of the second part hereby agrees to publish for party of the first part

the KENTUCKY MEDICAL JOURNAL on the paper of the quality furnished, the body of the JOURNAL to be printed in 10 point DeVenne type, the discussions and similar matter to be in 8 point DeVenne type, not more than one-third of each issue to be advertising matter, set by hand, each Jefferson County issue to consist of 48 pages, 2,500 copies in consideration of the sum of \$160.00 per month; and each regular issue to consist of sixty-four pages, 2,500 copies, in consideration of the sum of \$200.00 per month, or eighty pages, \$250.00, or of ninety-six pages, 2,500 copies, in consideration of \$300.00 per month. It is further agreed that the party of the second part agrees that the JOURNAL shall be mailed to the members before midnight on the 26th day of the month preceding issue, subject to a penalty of ten dollars (\$10) for each twenty-four hours, or fraction thereof delay.

It is further agreed that one-third of the copy of the Jefferson County number shall be in the hands of the printer on the 26th day of the month preceding issue, one-third on the 1st day of the month of issue, and the remaining one-third on the 5th day of the month of issue; the advertising forms to close on the 1st day of the month of issue.

It is further agreed that one-third of the copy for the regular number shall be in the hands of the printer on the 5th day of the month before issue, one-third on the 10th and one-third on the 16th day of the month before issue.

It is further agreed that the copy shall be correct, and the party of the second part agrees to pay twenty-five (25) cents for each typographical error not contained in the copy, galley proofs and page proofs are to be submitted to the editor, and it is agreed that it shall be read and returned within twenty-four hours after its submission.

It is further agreed that the second party shall furnish envelopes, the return card to be printed on same at the rate of \$1.00 per thousand which shall be addressed by the first party, and the JOURNAL shall be put in envelopes and mailed by the second party.

It is further agreed that this contract is to be continued for two years, beginning this, December 1st, 1914.

Witness our hands and seals this day and date above named.

KENTUCKY STATE MEDICAL ASSOCIATION (Inc.)

By E. RAU, Chairman Council.

TIMES-JOURNAL PUBLISHING COMPANY, (Inc.)

By W. J. DENHARDT, Manager.

We have had the reports of the Secretary and Treasurer audited by Mr. B. P. Eubank, Public Accountant, of Bowling Green, Kentucky, and submit his report herewith.

It will be noted again this year, as for the past seven years, that each item of expense and income are set forth so plainly, that not only every county society and its Delegates, but every member of the Association may know the details of our business affairs which are of interest and importance to every one of us. The Council and your officers will continue to work with the most careful attention to its every detail. It is to be remembered at all times that we are entirely under the control and direction of the members of the county societies through their duly elected delegates. If anything is being done wrong, if there is any way of improving it, if newer methods or better management will more nearly accomplish the purpose of this Association, we beg that it be submitted to the House of Delegates for its action at this session so that in the future conduct of the affairs of this Association we may best promote the purpose set forth in its Constitution and charter "to federate and bring into one compact organization the entire medical profession of the State of Kentucky, and to unite with similar associations in other states to form the American Medical Association with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of diseases, and in prolonging and adding comfort to life."

Respectfully submitted,
ERNEST RAU, Chairman.

Whooping Cough.—Pertussis stock vaccines as prepared by the New York Health Department Bureau of Laboratories, according to Luttinger, seem to have a prophylactic value when given in high doses. In the treatment of pertussis, these vaccines seem to have shortened the duration and severity of the paroxysmal stage; the average duration of the whoop being twenty-five days, compared to forty days of those treated with drugs.

The humble privy is like Pandora's box, however unclassical such a comparison may be. When left open it lets out diseases.

AUDITOR'S REPORT.

To the Council Kentucky State Medical Association:

GENTLEMEN:

At your request I have audited the books of your Treasurer, Dr. W. B. McClure, and your Secretary, Dr. A. T. McCormack, from September 1, 1915 to September 1, 1916, and beg to submit the following report.

CASH INVENTORY

Cash balance in Second National Bank Kentucky, to the credit of W. B. McClure, Treasurer	\$ 5,557.43
Cash in hand of Secretary, A. T. McCormack (check mailed to Treasurer)	139.93
	\$ 5,697.36
Less outstanding checks, viz:	
No. 90, Sampson & Sampson	15.00
No. 240, C. M. Coombs, City Tax Collector	9.57
No. 245, A. T. McCormack	125.00
No. 246, L. H. South	40.00
No. 247, Clyde W. Howell	75.00
No. 243, Mrs. W. H. Martin	25.00
	289.57
Net cash balance agreeing with Secretary	\$ 5,407.79
Real Estate mortgage bond E. H. Adams	1,000.00
Real estate mortgage bond C. B. Dobson	1,000.00
	2,000.00
Cash resources	\$ 7,407.79
Office furniture, etc (Exhibit "D")..	1,092.45

I have carefully compared every item and checked same from every angle and find same correct and the books in balance and neatly kept.

A full history of the year's work is shown in detail and summary in the following exhibits, which have been checked and proved:

Very truly,
B. P. EUBANK, Auditor.

EXHIBIT "A"

RECEIPTS.

Dues from county societies and subscriptions to JOURNAL	\$ 6,311.75
Income of JOURNAL, advertising, etc	4,705.01
Total	\$11,016.76
Income from investments, viz:	
12 months interest E. H. Adams bond (From Feb. 23, 1915 to Feb. 23, 1916)	60.00
6 months interest C. B. Dobson (From January 14, to July 14, 1916)	30.00
12 months interest on \$1,500 in Second National Bank, Lexington	45.00
	135.00
Total receipts for year	\$11,151.76
Balance on hand Sept. 1, 1915..	5,983.70
	\$17,135.46

DISBURSEMENTS.

State Medical Association:	
Secretary's Salary	\$ 1,500.00
Secretary's Stenographer	900.00
Secretary's Sundries	1.10
Secretary's Printing	52.00
Treasurer's Office Expense and Bond	22.50
Officers, Council and Committee Expenses	157.81
Costs, etc., Medico-Legal Committee	390.53

Attorney's fees, Medico-Legal Committee	1,885.00	Printing JOURNAL	3,301.20
Association Sundries	128.64	Expressage	61
Louisville Meeting Expenses	1,043.90	Postage	139.69
Hopkinsville Meeting Expenses ..	10.96	Sundries	543.81
Stamps and envelopes	169.92		
Mortgage Bond (C. B. Dobson) ..	1,000.00	Total Disbursements	\$11,727.67
JOURNAL Expenses:		Balance on hand Sept. 1, 1916.	5,407.79
Business Manager's Salary	\$ 480.00		
			\$17,135.46

EXHIBIT "B".

Detailed Statement of Disbursements of W. B. McClure, Treasurer Kentucky State Medical Association, each made on a Voucher Check signed by Dr. J. W. Kincaid, President, A. T. McCormack, Secretary, and himself, from September 1, 1915 to September 1, 1916.

1915.

October 4, VOUCHER CHECK No. 120	\$336.65
TIMES-JOURNAL PUBLISHING CO., Bowling Green.	
To 32000 ems killed	\$ 9.60
To 2500 96-page September 1st JOURNALS	300.00
By 14 type errors in same	\$ 3.50
To difference setting tabular matter	18.40
To 22 changes	4.40
To putting in inserts	2.50
To putting in second inserts	2.50
To 3 cuts and postage	2.75
	<u>\$340.15</u>
October 4, VOUCHER CHECK No. 121	\$180.37
DR. A. T. McCORMACK, Bowling Green.	
To postage on August 1st JOURNAL	\$ 10.30
To postage on September 1st JOURNAL	12.34
To telegrams	3.41
To Car fare	1.05
To Meals	12.85
To Telegrams	2.17
To Carriages	4.00
To Incidentals	9.00
To Messenger	25
To September Salary as Secretary	125.00
Approved by the Council and ordered paid by the House of Delegates.	
October 4, VOUCHER CHECK No. 122	\$ 48.60
DR. L. H. SOUTH, Bowling Green.	
To Carriage	\$ 60
To Meals	8.00
To September salary as Business Manager of the JOURNAL	40.00
Approved by the Council and ordered paid by the House of Delegates.	
October 4, VOUCHER CHECK No. 123	\$ 79.10
CLYDE W. HOWELL, Bowling Green.	
To Pullman 60, Baggage 75, Car Fare 85	\$ 2.20
To Supper 45, Lunch 45, Cab 25, Tips 75	1.90
To September salary as Stenographer	75.00
Approved by the Council and ordered paid by the House of Delegates.	
October 4, VOUCHER CHECK No. 124	\$ 13.61
MAYME SULLIVAN, Bowling Green.	
To Baggage 6.50, Pullman 1.20, Car Fare 85	\$ 8.55
To Meals 2.05, Service 1.00, Telegrams 51	3.56
To Pictures	1.50
Approved by the Council and ordered paid by the House of Delegates.	
October 4, VOUCHER CHECK No. 125	\$ 3.70
OLLIE DEPEW, Bowling Green.	
To Pullman 1.20, Cab 50, Meals 75	\$ 2.45
To Car Fare 1.00, Tips 25	1.25
Approved by the Council and ordered paid by the House of Delegates.	
October 4, VOUCHER CHECK No. 126	\$ 64.14
SEELBACH HOTEL COMPANY, Louisville.	
To Hotel and Meals, Dr. L. H. South	\$ 12.40
To Hotel and Meals, Mayme Sullivan	21.15
To Hotel and Meals, Clyde W. Howell	12.00
To Hotel and Meals, Ollie Depew	12.20
To Hotel and Meals, Dr. J. B. Murphy	6.00
Telegram sent to Dr. Hancock	39
Approved by the Council and ordered paid by the House of Delegates.	
October 4, VOUCHER CHECK No. 127	\$125.00
T. B. DUNCAN, Treasurer First Christian Church, Louisville.	
To use of Church for annual meeting of State Society, September 20 to 23rd, inclusive.	
Approved by the Council and ordered paid by the House of Delegates.	
October 4, VOUCHER CHECK No. 128	\$ 62.50
DR. E. L. HENDERSON, Secretary, Louisville.	
To 25 banquet tickets for exhibitors at \$2.50 each.	
Approved by the Council and ordered paid by the House of Delegates.	
October 4, VOUCHER CHECK No. 129	\$ 5.00
ALBERT WILHYTE, Janitor, Louisville.	
To services as Janitor during State meeting.	
Approved by the Council and ordered paid by the House of Delegates.	

October 4, VOUCHER CHECK No. 130		\$ 17.25
DR. J. S. LOCK, Councilor, Barbourville.		
To expenses for year 1915 as Councilor of Eleventh District.		
Approved by the Council and ordered paid by the House of Delegates.		
October 4, VOUCHER CHECK No. 131		\$ 19.50
DR. W. B. McCURE, Treasurer, Lexington.		
To express and expenses attending Louisville meeting.		
Approved by the Council and ordered paid by the House of Delegates.		
October 4, VOUCHER CHECK No. 132		\$ 25.55
DR. CYRUS GRAHAM, Councilor, Henderson.		
To expenses as Councilor of Second District for the year 1915.		
Approved by the Council and ordered paid by the House of Delegates.		
October 4, VOUCHER CHECK No. 133		\$ 34.00
DR. A. W. CAIN, Councilor, Somerset.		
To expenses as Councilor Seventh District as follows:		
To visit to Russell County Medical Society	\$ 8.00	
To visit to McCreary County Medical Society	3.50	
To visit to Casey County Medical Society	5.50	
To visit to Wayne County Medical Society	4.50	
To visit to Garrard County Medical Society	5.50	
To visit to Lincoln County Medical Society	5.00	
To Postage	2.00	
Approved by the Council and ordered paid by the House of Delegates.		
October 4, VOUCHER CHECK No. 134		\$ 25.15
DR. W. W. RICHMOND, Councilor, Clinton.		
To expenses as Councilor First District for 1915:		
To trip to Lyon County Medical Society	\$ 4.35	
To trip to McCracken County Medical Society	4.80	
To trip to Fulton County Medical Society	16.00	
Approved by the Council and ordered paid by the House of Delegates.		
October 4, VOUCHER CHECK No. 135		\$ 9.95
DR. I. A. SHIRLEY, Councilor, Winchester.		
To expenses as Councilor of Tenth District for 1915.		
Approved by the Council and ordered paid by the House of Delegates.		
October 4, VOUCHER CHECK No. 136		\$ 6.00
DR. R. C. McCHORD, Councilor, Lebanon.		
To expenses as Councilor of Sixth District.		
Approved by the Council and ordered paid by the House of Delegates.		
October 4, VOUCHER CHECK No. 137		\$ 56.75
AMERICAN MEDICAL ASSOCIATION, Chicago.		
To 5,000 President's supplements.		
Approved by the Council and ordered paid by the House of Delegates.		
October 4, VOUCHER CHECK No. 138		\$ 30.00
MADDOX AND PEARSE, Louisville.		
To operator and 2 lanterns for three days—8 lectures at Annual Meeting of State Society.		
Approved by the Council and ordered paid by the House of Delegates.		
October 4, VOUCHER CHECK No. 139		\$ 2.00
MESSRS. GEO. G. FETTER COMPANY, Louisville.		
To 1 box blue excelsior carbon.		
October 4, VOUCHER CHECK No. 140		\$ 7.50
FRED W. KEISKER, & SON, Louisville.		
To rent of 15 kitchen tables for use of exhibitors at Louisville meeting.		
Approved by the Council and ordered paid by the House of Delegates.		
October 4, VOUCHER CHECK No. 141		\$282.00
S. W. BASSETT COMPANY, Providence, Rhode Island.		
To 500 rolled gold Kentucky State buttons at .25 each	130.00	
To 800 Louisville bars and bangles at .19 each	152.00	
Approved by the Council and ordered paid by the House of Delegates.		
October 4, VOUCHER CHECK No. 142		\$ 3.00
KENTUCKY TENT & AWNING COMPANY, Louisville.		
To rent of tarpaulin.		
Approved by the Council and ordered paid by the House of Delegates.		
October 4, VOUCHER CHECK No. 143		\$292.05
TIMES-JOURNAL PUBLISHING CO., Bowling Green.		
To 600 registration cards	\$ 2.00	
To 2,500 blank cards	2.50	
To 2,000 linen letter heads, 24 lb	7.00	
To 3,300 2 page programs	6.00	
To 1,000 12-page programs	18.00	
To Brief in Blackburn-Francis case	42.00	
To 2,400 68-page October 1st JOURNALS	212.50	
By 19 errors in same		\$ 4.75
To 2,400 envelopes	2.40	
To 29 changes	4.40	
		\$296.00
Approved by the Council and ordered paid by the House of Delegates.		
October 4, VOUCHER CHECK No. 144		\$ 25.00
MR. B. P. EUBANK, Bowling Green.		
To auditing books of Secretary and Treasurer for period of September 1, 1914 to September 1, 1915, and reporting same.		
October 4, VOUCHER CHECK No. 145		\$ 19.75
LOUIS SUMMERS, Clerk Jefferson Circuit Court, Louisville.		
To clerk's cost in case of John M. Shelbourne vs. Dr. Leo Bloch.		
Approved by the Council and ordered paid by the House of Delegates.		
October 4, VOUCHER CHECK No. 146		\$150.00
FRED FORCHT, JR., Louisville.		

To services rendered as Attorney for State Society from January 1, 1915 to July 1, 1915.	
October 4, VOUCHER CHECK No. 147	\$ 84.96
W. C. MORRIS, Postmaster, Bowling Green.	
To 4,000 No. 5 stamped envelopes.	
October 4, VOUCHER CHECK No. 148	\$ 1.10
CHAS. A. MUNKLE, Bowling Green.	
To framing pictures of Drs. Moren and Kincaid.	
October 4, VOUCHER CHECK No. 149	\$ 8.12
CAPITOL ENGRAVING COMPANY, Nashville.	
To 4 half-tones at \$1.38 each	\$ 5.52
To 2 half-tones at	2.50
To Postage	10
October 4, VOUCHER CHECK No. 150	\$ 10.75
OLNEY GREGORY, Louisville.	
To carpenter's work and material furnished at church	\$ 10.00
To lumber and nails furnished for exhibitors	75
Approved by the Council and ordered paid by the House of Delegates.	
October 4, VOUCHER CHECK No. 151	\$ 5.00
THE ROSERY, Louisville.	
To flowers to Dr. Brooks at Dr. Board's Sanitarium sent September 21st.	
Approved by the Council and ordered paid by the House of Delegates.	
November 1, VOUCHER CHECK No. 152	\$ 12.50
HINES & HAGERMAN, Bowling Green.	
To premium on \$5,000 bond of W. B. McClure, Treasurer, with American Surety Company, No. 8803.	
November 1, VOUCHER CHECK No. 153	\$ 8.31
DR. JOHN J. MOREN, Louisville.	
To stamps to September 30, 1915	\$ 6.90
To telephone messages to September 30, 1915	1.41
Approved by the Council and ordered paid by the House of Delegates.	
November 1, VOUCHER CHECK No. 154	\$ 2.10
HARRY I. WOOD COMPANY, Louisville.	
To installing temporary wiring for exhibit as directed.	
Approved by the Council and ordered paid by the House of Delegates.	
November 2, VOUCHER CHECK No. 155	\$ 50.00
DR. W. S. SANDBACH, Secretary, Casky.	
To amount advanced by special order of the Council for the employment of attorneys in a blackmail suit against Dr. S. H. Williams, Crofton, Ky.	
November 2, VOUCHER CHECK No. 156	\$ 27.00
COURIER-JOURNAL JOB PRINTING COMPANY, Louisville.	
To 2,500 membership cards Litho "1916" 2 colors.	
November 2, VOUCHER CHECK No. 157	\$ 2.91
CAPITOL ENGRAVING COMPANY, Nashville.	
To half-tone of Dr. U. L. Taylor's picture for JOURNAL	\$ 2.85
To Postage	06
November 2, VOUCHER CHECK No. 158	\$ 1.05
JOHN W. MENZIES, Clerk.	
To copy petition Fairrell vs. Struble et al.	
November 2, VOUCHER CHECK No. 159	\$ 3.00
MRS. BELLE GALLOWAY, Bowling Green.	
To copying opinion of Judge Moss in case of Mrs. Annie Miller vs. Drs. Blackburn & Francis to be used in brief for Defendants.	
November 2, VOUCHER CHECK No. 160	\$255.83
WILLIAM WHITFORD, Chicago.	
To reporting 4 days Louisville meeting	\$ 40.00
To railroad fare and expenses	24.70
To Transcript House of Delegates, General Meeting and Discussions (7641 1-2 folios)	191.13
November 2, VOUCHER CHECK No. 161	\$135.43
DR. A. T. McCORMACK, Bowling Green.	
To Telegram	\$ 55
To Postage on October 1st JOURNAL	9.88
To October salary as Secretary	125.00
November 2, VOUCHER CHECK No. 162	\$ 40.00
DR. L. H. SOUTH, Bowling Green.	
To October salary as Business Manager.	
November 2, VOUCHER CHECK No. 163	\$ 75.00
CLYDE W. HOWELL, Bowling Green.	
To October salary as Stenographer.	
November 1, VOUCHER CHECK No. 164	\$430.63
TIMES-JOURNAL PUBLISHING CO., Bowling Green.	
To 5,000 Letter heads for Secretary	\$ 15.00
To 500 Letter heads and envelopes for Councilor 1st District	4.00
To 500 Letter heads and envelopes for Councilor 6th District	4.00
To 500 Letter heads and envelopes for President-Elect	4.00
To 1,000 Letter heads and envelopes for Treasurer	6.50
To 500 Letter heads and envelopes for President	4.00
To 500 Letter heads and envelopes for First Vice President	4.00
To 300 Letter heads and envelopes for Second Vice President	3.25
To 300 Letter heads and envelopes for Third Vice President	3.25
To Express on the above	2.43
To 3,500 108-page November 1st JOURNALS	402.50
By 2 1-2 days delay	
By 20 errors in same	\$25.00
To 3,500 envelopes	3.50
To 21 changes	4.20
	\$460.63

December 1, VOUCHER CHECK No. 165			\$146.05
DR. A. T. McCORMACK, Bowling Green.			
To Telegram to Louisville	\$ 55		
To Postage on November JOURNAL (3500 sent out)	20.50		
To November salary as Secretary	125.00		
December 1, VOUCHER CHECK No. 166			\$ 40.00
DR. L. H. SOUTH, Bowling Green.			
To November salary as Business Manager of JOURNAL.			
December 1, VOUCHER CHECK No. 167			\$ 75.00
CLYDE W. HOWELL, Bowling Green.			
To November salary as Stenographer.			
December 1, VOUCHER CHECK No. 168			\$317.56
TIMES-JOURNAL PUBLISHING CO., Bowling Green.			
To 2,500 96-page December 1st JOURNALS	\$300.00		
By 39 errors in same		\$ 9.75	
To 2,500 envelopes	2.50		
To Difference in setting index	8.80		
To 29 changes	5.80		
To 500 Letter heads and envelopes for Councilor 1st District	4.00		
To Express on same	46		
To 300 four-page Medico-Legal Committee reports	5.75		
			<u>\$327.21</u>
1916			
January 1, VOUCHER CHECK No. 169			\$134.55
DR. A. T. McCORMACK, Bowling Green.			
To Postage on December JOURNAL	\$ 9.55		
To Salary for December	125.00		
January 1, VOUCHER CHECK No. 170			\$ 40.00
DR. L. H. SOUTH, Bowling Green.			
To December salary as Business Manager.			
January 1, VOUCHER CHECK No. 171			\$ 75.00
CLYDE W. HOWELL, Bowling Green.			
To December salary as Stenographer.			
January 1, VOUCHER CHECK No. 172			\$ 75.00
TINSLEY-MAYER ENGRAVING COMPANY, Louisville.			
To 30 half-tones, views of operation for Dr. Speidel's paper.			
January 1, VOUCHER CHECK No. 173			\$ 6.75
INDIANA PRESS CLIPPING SERVICE, Indianapolis.			
To clipping service from October 23, 1915 to January 1, 1916.			
January 1, VOUCHER CHECK No. 174			\$ 9.00
DR. W. W. RICHMOND, Clinton.			
To Expenses two trips to Clinton by Drs. Bondurant, Cairo, Ill., case of J. S. Adams vs. Drs. Richmond and McMorries.			
January 1, VOUCHER CHECK No. 175			\$ 1.75
D. C. BRENNER & COMPANY, Louisville.			
To fac simile signature of President.			
January 1, VOUCHER CHECK No. 176			\$ 15.15
CAPITOL ENGRAVING COMPANY, Nashville.			
To 15 half-tones.			
January 1, VOUCHER CHECK No. 177			\$ 12.00
AMERICAN MEDICAL ASSOCIATION, Chicago.			
To 2 copies of Regulation of Practice of Medicine to Hon. Aaron Kohn, Louisville, and Eli Brown, Frankfort.			
January 1, VOUCHER CHECK No. 178			\$241.52
SAMPSON & SAMPSON, Attorneys, Middlesboro.			
To one half expense in case of J. L. Dawn vs. Dr. Arthur Jenkins (court costs)	\$116.52		
To one half attorney's fee in same	125.00		
January 1, VOUCHER CHECK No. 179			\$279.29
TIMES-JOURNAL PUBLISHING CO., Bowling Green.			
To 2 cuts of Dr. Gary for JOURNAL	\$ 1.95		
To 1,000 punched cards	2.30		
To 2,500 98-page January 1st JOURNALS	275.00		
By 25 errors in same		\$ 6.25	
To 2,500 envelopes	2.50		
To Changes in form	3.70		
			<u>\$285.45</u>
January 14, VOUCHER CHECK No. 180			\$1,000.00
POTTER-MATLOCK TRUST COMPANY, Bowling Green.			
To 6 per cent. First Mortgage C. B. Dobson Bond.			
February 1, VOUCHER CHECK No. 181			\$139.45
DR. A. T. McCORMACK, Bowling Green.			
To Postage on January 1st JOURNAL	\$ 13.94		
To Telegram to Louisville	51		
To January salary	125.00		
February 1, VOUCHER CHECK No. 182			\$ 40.00
DR. L. H. SOUTH, Bowling Green.			
To January salary as Business Manager.			
February 1, VOUCHER CHECK No. 183			\$ 75.00
CLYDE W. HOWELL, Bowling Green.			
To January salary as Stenographer.			

February 1, VOUCHER CHECK No. 184	DR. W. F. OWSLEY, Secretary, Burkesville. To returned dues to Dr. Boles. Not licensed in State.	\$ 3.00
February 1, VOUCHER CHECK No. 185	BOOK SHOP BINDERY, Chicago. To binding Kentucky Medical Journal for 1915.	\$ 1.25
February 1, VOUCHER CHECK No. 186	FRED FORCHT, JR., Attorney, Louisville. To fee for services in case of Wu. Corcoran, et al's vs. Dr. L. A. Crutcher.	\$ 25.00
February 1, VOUCHER CHECK No. 187	TIMES-JOURNAL PUBLISHING CO., Bowling Green To 51 half-tones for Dr. Murphy's paper	\$ 59.20
	To Express on same	61
	To 2,500 80-page February 1st JOURNALS	250.00
	By 32 errors in same	\$ 8.00
	To 2,500 envelopes	2.50
	To 21 changes	4.20
		<u>\$316.51</u>
March 1, VOUCHER CHECK No. 188	DR. A. T. McCORMACK, Bowling Green. To Postage on February 1st JOURNAL	\$ 6.52
	To Salary as Secretary	125.00
March 1, VOUCHER CHECK No. 189	DR. L. H. SOUTH, Bowling Green. To Salary as Business Manager of JOURNAL.	\$ 40.00
March 1, VOUCHER CHECK No. 190	CLYDE W. HOWELL, Bowling Green. To Salary as Stenographer.	\$ 75.00
March 1, VOUCHER CHECK No. 191	HON. FRED FORCHT, JR., Louisville. To services from July 1, 1915 to January 1916, as General Counsel.	\$150.00
March 1, VOUCHER CHECK No. 192	W. G. DEARING, Attorney, Whitesburg. To services in suit of Elmer Dorton vs. Dr. W. L. Gambill, in Letcher Circuit Court and dismissing same at the January term of Court, 1916.	\$ 50.00
March 1, VOUCHER CHECK No. 193	R. M. HOLLAND, Attorney, Owensboro. To prosecution in chiropractic cases.	\$ 25.00
March 1, VOUCHER CHECK No. 194	CAPITAL HOTEL, Frankfort. To hotel and meals for Dr. Board at Frankfort. Member of Committee on Legislation and Public Policy.	\$ 4.50
March 1, VOUCHER CHECK No. 195	INDIANA PRESS CLIPPING SERVICE, Indianapolis. To clipping service for January.	\$ 3.00
March 1, VOUCHER CHECK No. 196	BOWLING GREEN MESSENGER, Bowling Green. To 1,000 Letter heads and postage for Dr. John J. Moren, Louisville, Ky.	\$ 4.60
March 1, VOUCHER CHECK No. 197	AMERICAN MEDICAL ASSOCIATION, Chicago. To 2,500 supplements KENTUCKY MEDICAL JOURNAL (Hon. Aaron Kohn's picture.)	\$ 30.00
March 1, VOUCHER CHECK No. 198	TIMES-JOURNAL PUBLISHING CO., Bowling Green. To 2,500 96-page March 1st JOURNALS	\$300.00
	By 2 errors in same	\$ 50
	To extra paper	43.20
	To difference in ink	4.80
	To 2,500 envelopes	2.50
	To 23 changes	4.60
	To 5,000 letter heads	15.00
		<u>\$370.10</u>
March 1, VOUCHER CHECK No. 199	SAMPSON & SAMPSON, Attorneys, Middlesboro. To services in suit of Dr. Arthur Jenkins vs. Ed. Bunch.	\$125.00
April 1, VOUCHER CHECK No. 200	DR. A. T. McCORMACK, Bowling Green. To Postage on March and April JOURNALS	\$ 11.50
	To 4,000 2-cent stamped envelopes	84.96
	To March salary as Secretary	125.00
April 1, VOUCHER CHECK No. 201	DR. L. H. SOUTH, Bowling Green. To Salary as Business Manager of JOURNAL.	\$ 40.00
April 1, VOUCHER CHECK No. 202	CLYDE W. HOWELL, Bowling Green. To March salary as Stenographer.	\$ 75.00
April 1, VOUCHER CHECK No. 203	DR. L. S. TRUSLER, Chicago. To securing 47 new members as representative of the American Medical Association at \$1.00 each.	\$ 47.00

April 1,	VOUCHER CHECK No. 204			\$ 13.00
	T. W. SINGER, Chicago.			
	To securing 13 new members as representative of the American Medical Association at \$1.00 each.			
April 1,	VOUCHER CHECK No. 205			\$ 25 00
	HON. HUBBARD SCHWARTZ, Newport.			
	To services of Frank Ortlieb in obtaining evidence in case of Farrell vs. Struble, et al.	\$ 5.00		
	To amount paid J. W. Menzies, Clerk, Eastern District of Kentucky, February 26, 1916	20.00		
April 1,	VOUCHER CHECK No. 206			\$ 3 45
	SAMPSON & SAMPSON, Attorneys, Middlesboro.			
	To one-half reporting case of Ed Bunch vs. Dr. Arthur Jenkins (stenographer's bill)	\$ 5.00		
	To one-half of defendant's cost	4.45		
April 1,	VOUCHER CHECK No. 207			\$ 3.50
	REMINGTON TYPEWRITER COMPANY, Louisville.			
	To one-half dozen ribbon coupon book.			
April 1,	VOUCHER CHECK No. 208A			\$332.10
	TIMES-JOURNAL PUBLISHING CO., Bowling Green.			
	To 2,500 96-page April 1st JOURNALS	\$224.20		
	By 15 errors in same		\$ 3.75	
	To putting in inserts	2.25		
	To 2,500 envelopes	2.50		
	To 21 changes	2.20		
	To 12,500 ems killed	5.00		
		\$336.15		
May 1,	VOUCHER CHECK No. 208B			\$133.95
	DR. A. T. McCORMACK, Bowling Green.			
	To Postage on May 1st JOURNAL	\$ 8.95		
	To Salary for April as Secretary	125.00		
May 1,	VOUCHER CHECK No. 209			\$ 40.00
	DR. L. H. SOUTH, Bowling Green.			
	To April Salary as Business Manager of the JOURNAL			
May 1,	VOUCHER CHECK No. 210			\$ 75.00
	CLYDE W. HOWELL, Bowling Green.			
	To April Salary as Stenographer.			
May 1,	VOUCHER CHECK No. 211			\$ 10.20
	LOUIS SUMMERS, Clerk Jefferson County Court, Louisville.			
	To clerk's fees in case of G. G. Rutherford vs. David Y. Roberts (March 24, 1915).			
May 1,	VOUCHER CHECK No. 212			\$ 75.00
	HON. FRED FORCHT, JR., Louisville.			
	To attorney's fee in case of Chas. W. Connor vs. Dr. T. J. Crice.			
May 1,	VOUCHER CHECK No. 213			\$250.00
	HON. HUBBARD SCHWARTZ, Newport.			
	To professional services in United States District Court for the Eastern District of Kentucky, from August 12, 1915 to date, in case of Jos. Farrell vs. Dr. C. H. Struble and W. E. Senour.			
May 1,	VOUCHER CHECK No. 214			\$250.00
	MESSRS. MYERS & HOWARD, Attorneys, Covington.			
	To professional services in the United States District Court for the Eastern District of Kentucky, from August 12, 1915 to date, in case of Joseph Farrell vs. Drs. C. H. Struble and W. E. Senour.			
May 1,	VOUCHER CHECK No. 215			\$ 30.00
	J. G. McLEAN, Official Reporter, Louisville.			
	To reporting trial of Jos. E. Farrell vs. Drs. C. H. Struble and W. E. Senour at April term 1916 at Covington—three days. (April 13, 14 and 15) at \$10 a day.			
May 1,	VOUCHER CHECK No. 216			\$304.50
	TIMES-JOURNAL PUBLISHING CO., Bowling Green.			
	To 2,200 88-page May 1st JOURNALS	\$ 15.00		
	To 4,000 24-lb linen letter heads	260.00		
	By 20 errors in same		\$ 5.00	
	To 2,200 envelopes	2.20		
	To difference on cost of paper	28.50		
	To 18 changes	3.60		
		\$309.30		
	Less errors	5.00		
June 1,	VOUCHER CHECK No. 217			\$136.21
	DR. A. T. McCORMACK, Bowling Green.			
	To Postage on June 1st JOURNAL	\$ 11.21		
	To May salary as Secretary	125.00		
June 1,	VOUCHER CHECK No. 218			\$ 40.00
	DR. L. H. SOUTH, Bowling Green.			
	To salary as Business Manager of JOURNAL.			
June 1,	VOUCHER CHECK No. 219			\$ 75.00
	CLYDE W. HOWELL, Bowling Green.			
	To salary for May as Stenographer.			
June 1,	VOUCHER CHECK No. 220			\$ 41.80
	DR. PEYTON LIGON, Henderson.			
	To execution No. 44062 (Sheriff's fee) in case of Amos Allen & Co., vs. Dr. Ligon	\$ 19.80		

	To 7 witnesses fees paid out by Dr. Ligon	22.00	
June 1,	VOUCHER CHECK No. 221		\$ 4.80
	FRANK DUGAN, Clerk Jefferson County Court, Louisville. To clerk's cost in case of Chas. W. Connor vs. Dr. Thos. J. Cricc.		
June 1,	VOUCHER CHECK No. 222		\$250.00
	HON. M. S. BURNS, CAIN AND THOMPSON, Louisa. To attorney's fees case of Dr. J. W. Carter, Fallsburg, Ky., in Lawrence County Circuit Court.		
June 1,	VOUCHER CHECK No. 223		\$ 11.83
	CAPITOL ENGRAVING COMPANY, Nashville. To 2 zinc etchings for Dr. Carpenter's paper	\$ 7.80	
	To drawings	4.00	
	To postage	08	
June 1,	VOUCHER CHECK No. 224		\$312.40
	TIMES-JOURNAL PUBLISHING CO., Bowling Green. To 4 half-tones for Dr. Spaulding's paper	\$ 7.95	
	To 2,300 June 1st 96-page JOURNALS	290.00	
	By 61 errors in same ..6.....		\$15.00
	To difference in cost of paper	23.20	
	To Envelopes	2.30	
	To 21 changes	4.20	
July 1,	VOUCHER CHECK No. 225		\$125.00
	DR. A. T. McCORMACK, Bowling Green. To June salary as Secretary.		
July 1,	VOUCHER CHECK No. 226		\$ 40.00
	DR. L. H. SOUTH, Bowling Green. To June salary as Business Manager of JOURNAL.		
July 1,	VOUCHER CHECK No. 227		\$ 75.00
	CLYDE W. HOWELL, Bowling Green. To June salary as Stenographer.		
July 1,	VOUCHER CHECK No. 228		\$100.00
	MESSRS. BERRY & GRASSHAM, Attorneys, Paducah. To attorney's fee—Malone vs. Mason, Evans and Keys.		
July 1,	VOUCHER CHECK No. 229		\$ 25.00
	W. C. MORRIS, Postmaster, Bowling Green. To amount deposited for postage on KENTUCKY MEDICAL JOURNAL		
July 1,	VOUCHER CHECK No. 230		\$ 86.35
	DR. GEO. W. BROWN. To amount paid attorney in case of Mayberry vs. Dr. Geo. W. Brown, Newport \$ 75.00 To court costs in same case	11.35	
July 1,	VOUCHER CHECK No. 231		\$100.00
	SIMS, RODES & SIMS, Attorneys, Bowling Green. To attorneys fee in case of C. K. Jones, admr., for his wife vs. St. Joseph's Hospital.		
July 1,	VOUCHER CHECK No. 232		\$ 47.95
	DR. T. O. HELM, Bowling Green. To court costs in suit of C. K. Jones, admr., for his wife, vs. Dr. T. O. Helm.		
July 1,	VOUCHER CHECK No. 233		\$ 10.00
	CHILDERS & CHILDERS, Attorneys, Pikeville. To legal services in case of J. E. Rowe vs. Marrowbone Coal Company and Dr. M. A. Lenton.		
July 1,	VOUCHER CHECK No. 234		\$ 2.37
	CAPITOL ENGRAVING COMPANY, Nashville. To half tone Christian Church at Hopkinsville for floor plan—1916 meeting... \$ 2.31 To Postage	06	
July 1,	VOUCHER CHECK No. 235		\$10.00
	UNIVERSITY BOOK STORE, LEXINGTON. To 750 sheets (May 12)	\$ 6.50	
	To 500 envelopes	3.50	
July 1,	VOUCHER CHECK No. 236		\$268.10
	TIMES-JOURNAL PUBLISHING CO., Bowling Green. To 9 cuts for Dr. Askenstedt's paper	\$ 8.25	
	To 2,300 80-page JOURNALS	240.00	
	By 25 type errors in same		\$ 6.25
	To 2,300 envelopes	2.30	
	To 22 changes	4.40	
	To difference in cost of paper	19.40	
		\$274.35	
	Less	6.25	
August 1,	VOUCHER CHECK No. 237		\$125.00
	DR. A. T. McCORMACK, Bowling Green. To July salary as Secretary.		
August 1,	VOUCHER CHECK No. 238		\$ 40.00
	DR. L. H. SOUTH, Bowling Green. To July salary as Business Manager.		
August 1,	VOUCHER CHECK No. 239		\$ 75.00
	CLYDE W. HOWELL, Bowling Green. To salary for July as Stenographer.		
August 1,	VOUCHER CHECK No. 240		\$ 9.57
	C. M. COOMBS, City Tax Collector, Bowling Green. To Taxes for year 1916.		
August 1,	VOUCHER CHECK No. 241		\$ 15.00
	CENTRAL PRESS CLIPPING SERVICE, Indianapolis. To clipping service for February, March, April, May and June.		

August 1, VOUCHER CHECK No. 242	\$ 8.59
CAPITOL ENGRAVING COMPANY, Nashville	
To 1 zinc etching of floor plan for Hopkinsville meeting	\$ 8.50
To Postage	09
August 1, VOUCHER CHECK No. 243	\$ 75.00
HON. H. R. DYSARD, Ashland.	
To legal services rendered in case of Gallion vs. Dr. G. W. Moore.	
August 1, VOUCHER CHECK No. 244	\$270.60
TIMES-JOURNAL PUBLISHING CO., Bowling Green.	
To 2,300 80-page August 1st JOURNALS	\$240.00
To difference in cost of paper	26.50
To 2,300 envelopes	2.30
To 9 changes	1.80
September 1, VOUCHER CHECK No. 245	\$125.00
DR. A. T. McCORMACK, Bowling Green.	
To August salary as Secretary.	
September 1, VOUCHER CHECK No. 246	\$ 40.00
DR. L. H. SOUTH, Bowling Green.	
To August salary as Business Manager.	
September 1, VOUCHER CHECK No. 247	\$ 75.90
CLYDE W. HOWELL, Bowling Green.	
To August salary as Stenographer.	
September 1, VOUCHER CHECK No. 248	\$ 25.00
MRS. W. H. MARTIN, Midway.	
To biographical sketch of Ephraim McDowell for JOURNAL.	
Total for 1916	\$11,727.37

EXHIBIT "C".

Detailed list of receipts from county societies from September 1, 1915 to September 1, 1916 compared with incomes of same period last year.

County	1915	1916	Jackson	9.00	15.00
Adair	\$ 31.00	\$ 27.00	Jefferson	802.50	890.00
Allen	33.00	42.00	Jessamine	24.00	33.00
Anderson	30.50	24.50	Johnson	33.00	27.50
Ballard	58.50	54.00	Knox	54.00	51.00
Barren	63.00	69.00	Laurel	42.00	33.00
Bath	24.00	30.00	Larue	37.50	30.00
Bell	99.00	93.00	Lawrence	26.40	47.75
Boone	37.50	33.00	Lee	24.00	27.00
Bourbon	54.00	42.00	Leslie	9.00	18.00
Boyd	67.00	84.00	Letcher	17.00	27.00
Boyle	44.00	47.00	Lewis	22.00	30.00
Brocken	18.00	15.50	Lincoln	54.00	54.00
Breathitt	28.50	30.00	Livingston	24.00	18.00
Breckinridge	58.50	63.00	Logan	69.00	72.00
Bullitt	54.50	30.00	Lyon	27.00	21.00
Butler	19.50	15.00	McCracken	136.00	132.00
Caldwell	33.00	36.00	McCreary	27.00	21.00
Calloway	53.00	51.00	McLean	36.00	21.00
Campbell-Kenton	394.50	345.00	Madison	60.00	66.00
Carlisle	43.00	36.00	Magoffin	24.00	27.00
Carroll	39.00	30.00	Marion	53.00	60.00
Carter	56.50	48.00	Marshall	45.00	39.00
Casey	24.00	33.00	Martin	3.25	0.00
Christian	131.00	153.50	Mason	67.50	72.00
Clark	78.00	63.00	Meade	30.00	30.00
Clay	27.00	27.00	Menifee	9.50	6.50
Clinton	18.00	18.00	Mercer	60.00	57.00
Crittenden	23.50	23.50	Metcalfe	40.00	39.00
Cumberland	36.00	24.00	Monroe	40.50	42.00
Daviess	207.00	207.00	Montgomery	57.00	48.00
Elliott	6.00	3.00	Morgan	15.00	12.00
Estill	15.50	9.00	Muhlenberg	66.00	63.00
Fayette	225.00	207.00	Nelson	51.00	45.00
Fleming	57.00	60.00	Nicholas	46.50	27.00
Floyd	42.00	30.00	Ohio	33.00	24.00
Franklin	57.00	81.00	Oldham	34.00	34.50
Fulton	45.00	51.00	Owen	27.00	21.00
Gallatin	15.00	15.00	Owsley	15.00	21.00
Garrard	33.00	33.00	Pendleton	59.50	51.00
Grant	40.50	36.00	Perry	24.00	37.00
Graves	99.00	111.00	Pike	45.50	42.00
Grayson	51.00	51.00	Powell	27.00	24.00
Green	15.04	16.00	Palaski	36.00	57.00
Greenup	30.00	36.00	Robertson	15.00	12.00
Hancock	3.00	3.00	Rockcastle	27.00	27.00
Hardin	69.00	72.00	Rowan	21.00	24.00
Harlan	37.50	33.00	Russell	30.00	27.00
Hart	37.00	33.00	Scott	63.00	54.00
Harrison	63.00	63.00	Shelby	63.00	64.00
Henderson	99.00	90.00	Simpson	36.00	36.00
Henry	54.00	57.00	Spencer	15.00	15.00
Hickman	46.00	45.00	Taylor	39.00	36.00
Hopkins	90.00	84.00	Todd	37.00	36.00
			Trigg	15.00	24.00
			Trimble	21.00	15.00
			Union	51.50	61.00
			Warren	146.92	132.50
			Washington	36.00	42.00
			Wayne	24.00	27.00
			Webster	28.00	21.00
			Whitley	100.50	81.00
			Wolfe	27.50	21.50
			Woodford	24.00	30.00

EXHIBIT "D".

Invoice of property of the Association, September 1, 1916.

Addressograph with 5,000 complete addressed plates with list devices, etc	\$ 600.00
Folding Machine	140.00
2 Oliver typewriters	200.00
1 Desk	79.00
Filing	64.75
Rubber Stamps	9.00
Typewriter Cabinet	33.00
Guide Cards	7.48
1-3 Adding Machine	106.25
Typewriter Chair	9.00
1 Electric Fan	18.00
1 Desk Chair	32.50
1 Globe Cabinet Safe with fixtures	130.00
2,000 No. 5 two-cent stamped envelopes	42.48
1,000 No. 8 two-cent stamped envelopes	22.00
Total	\$1,492.46
Reduction for depreciation of machinery	400.00
	<u>\$1,092.46</u>

EXHIBIT "G".

Secretary's monthly balance sheet agreeing with the books.

1916	Expense	Collection	Balance
September 1, 1915, Balance on hand.....			\$5,983.70
October 1, ...	\$2,034.07	\$1,190.12	5,139.75
November 1, ...	1,043.76	594.93	4,690.92
December 1, ...	578.61	392.28	4,504.59
January 1, 1916.....	839.92	1,263.88	4,878.55
February 1, ...	1,592.21	1,067.35	4,353.69
March 1, ...	1,008.22	1,578.54	4,924.01
April 1, ...	766.81	2,314.35	6,471.55
May 1, ...	1,168.45	1,163.77	6,466.87
June 1, ...	872.09	471.49	6,066.27
July 1, ...	889.77	627.59	5,804.09
August 1, ...	618.76	347.53	5,532.86
September 1, ...	265.00	139.93	5,407.79
	<u>\$11,727.67</u>	<u>\$11,151.76</u>	
Balance Sept. 1, 1915		5,893.70	
Balance Sept. 1, 1915		5,983.70	
Balance September 1, 1916.....			\$ 5,407.79
Total Expense			<u>11,727.67</u>
Total			<u>\$17,135.46</u>

EXHIBIT "H".

Collections by Editor on account of THE JOURNAL, corresponding with checks, deposit slips and receipts filed herewith.

1915-1916.	
October 1—To Collections to October 1	\$ 975.42
November 1—To Collections to November 1	539.43
December 1—To Collections to December 1	350.28
January 1—To Collections to January 1	467.23
February 1—To Collections to February 1	215.85
March 1—To Collections to March 1	408.04
April 1—To Collections to April 1	326.35
May 1—To Collections to May 1	415.27
June 1—To Collections to June 1	219.24
July 1—To Collections to July 1	515.59
August 1—To Collections to August 1	276.52
September 1—To Collections to September 1	130.93
Total	<u>\$4,840.01</u>

EXHIBIT "I".

Collections by Secretary on account of Kentucky State Medical Association, corresponding with checks, deposit slips and receipts filed herewith.

19115-1916	
October 1—To Collections to October 1	\$ 215.00
November 1—To Collections to November 1	55.50
December 1—To Collections to December 1	42.00
January 1—To Collections to January 1	796.50
February 1—To Collections to February 1	851.50

April 1—To Collections to April 1	1,988.00
March 1—To Collections to March 1	1,170.50
May 1—To Collections to May 1	748.50
June 1—To Collections to June 1	252.25
July 1—To Collections to July 1	112.00
August 1—To Collections to August 1	71.00
September 1—To Collections to September 1	9.00

Total

REPORT OF THE SECRETARY.

I have the honor of submitting the following report from September 1, 1915 to September 1, 1916. While we have approximately the same membership as last year, we still have between four and six hundred doctors who pay their dues on an average of about one year in five, and are missed in the annual collections by the secretaries, the other years. This has been reiterated so frequently in my annual reports and in those of the Chairman of the Medico-Legal Committee and the Treasurer that it seems almost a waste of time to do the same thing again and again. Such delinquents have failed to realize the real meaning of membership in the Association. They receive the JOURNAL for so short a time each year that they cannot keep in touch with the progress of their fellows in the State, know little or nothing about what the organization is doing, and cannot get up much interest in its affairs. Such members are not protected by the Medico-Legal Committee from unjust or other malpractice suits, they cannot be recommended for reciprocity with other states in case they apply, and are hangers-on in the profession rather than real members of it. Within the past six weeks eight applications have been made to the State Board of Health for endorsement for reciprocity with other states by men who have had more or less connection with the county societies but who were at the time not in good standing, and could not be recommended. This should be emphasized so that the doctors, especially the young doctors, will help to do the actual work necessary to get any sort of results. All of us must realize that the Association still has its most important work to do—to make a real working body of each of the county societies which are now mere shells. We still have a number of societies which do nothing but collect dues. They are little better than none. Successful organization in each county at the beginning will be due to the work of the councillor and one or two men with the real inspiration and feeling of self-sacrifice necessary to accomplish anything. After a few years of work by such men the members begin to feel that the work of the organization is their own personal work and it becomes much easier. There are more than eighty counties now holding regular meetings. If those doctors living in the less fortunate ones could attend one or more such meetings there

would be no difficulty in getting a good organization in every county.

I desire to again call the attention of our members to the fact that the text book on sanitation now taught, or required by law to be taught, in every common school in the State teaches every pupil to ask his family physician whether he attends his county society meetings regularly, and warns the children that he is not a safe doctor unless he does so. Popular education is increasing rapidly in all the realms of preventive medicine and it is important to every doctor's success that he realize this tendency and place himself abreast of the times, as the people themselves are being educated as to the possibilities undreamed of by us a few years ago.

The attached table shows the average membership in the county societies for the past five years and the increases or decreases for the current year. We trust the counsellors and secretaries will be able to make numerous changes in this table by the time of the Annual Meeting, for the better. It is to be noted that the fifth, sixth, eighth, ninth, tenth, and eleventh districts show increases and the others decreases over the five-year average.

FIRST DISTRICT.

Av. M'b'rship				
County	5 Yrs.	1916	Inc.	Dec
Ballard	19	18	0	1
Caldwell	14	12	0	2
Calloway	19	13	0	6
Carlisle	13	12	0	1
Fulton	16	16	0	0
Graves	32	36	4	0
Hickman	16	15	0	1
Livingston	8	6	0	2
Lyon	9	7	0	2
Marshall	18	13	0	5
McCracken	45	44	0	1
Trigg	8	8	0	0
Total	217	200	4	21

SECOND DISTRICT.

Av. M'b'rship				
County	5 Yrs.	1916	Inc.	Dec
Freckinridge	18	19	1	0
Crittenden	9	8	0	1
Daviess	70	68	0	2
Hancock	2	1	0	1
Henderson	36	29	0	7
Hopkins	31	28	0	3
McLean	11	7	0	4
Ohio	12	8	0	4
Muhlenberg	26	21	0	5
Union	17	19	2	0
Webster	10	7	0	3
Total	242	215	3	30

THIRD DISTRICT.

Av. M'b'rship				
County	5 Yrs.	1916	Inc.	Dec
Allen	11	12	1	0
Barren	22	24	2	0
Butler	7	5	0	2
Christian	41	48	7	0
Cumberland	10	8	0	2
Logan	25	23	0	2
Metcalfe	11	13	2	0
Monroe	12	14	2	0
Simpson	12	12	0	0
Todd	13	12	0	1
Warren-Edmonston	50	41	0	9
Total	241	212	14	16

FOURTH DISTRICT.

Av. M'b'rship				
County	5 Yrs.	1916	Inc.	Dec
Ballitt	13	10	0	3
Grayson	20	17	0	3
Hardin	24	23	0	1
Hart	14	11	0	3
Henry	17	18	1	0
Larue	12	10	0	2
Meade	11	10	0	1
Nelson	18	15	0	3
Oldham	11	11	0	0
Shelby	25	21	0	4
Total	165	146	1	20

FIFTH DISTRICT.

Av. M'b'rship				
County	5 Yrs.	1916	Inc.	Dec
Anderson	8	8	0	0
Boone	14	10	0	4
Carroll	15	10	0	5
Gallatin	5	5	0	0
Jefferson	213	266	53	0
Owen	11	7	0	4
Spencer	6	5	0	1
Trimble	7	5	0	2
Total	299	341	58	16

SIXTH DISTRICT.

Av. M'b'rship				
County	5 Yrs.	1916	Inc.	Dec
Adair	10	9	0	1
Boyle	14	15	1	0
Green	6	5	0	1
Marion	18	20	2	0
Mercer	12	19	0	0
Taylor	10	12	2	0
Washington	13	14	1	0
Total	90	94	6	2

SEVENTH DISTRICT.

Av. M'b'rship				
County	5 Yrs.	1916	Inc.	Dec
Casey	8	10	2	0
Clinton	6	6	0	0
Garrard	11	11	0	0
Lincoln	19	17	0	2
McCreary	9	7	0	2
Pulaski	20	18	0	2
Rockcastle	9	9	0	0
Russell	8	9	1	0
Wayne	8	9	1	0
Total	98	96	4	6

EIGHTH DISTRICT.

Av. M'b'rship				
County	5 Yrs.	1916	Inc.	Dec
Bourbon	14	14	0	0
Bracken	6	5	0	1
Campbell-Kenton	76	100	24	0
Fleming	14	20	6	0
Grant	14	12	0	2
Harrison	23	20	0	3
Jessamine	9	11	2	0
Mason	14	24	10	0
Nicholas	13	9	0	4
Pendleton	19	17	0	2
Robertson	5	4	0	1
Scott	18	18	0	0
Woodford	10	10	0	0
Total	235	264	42	13

NINTH DISTRICT.

Av. M'b'rship				
County	5 Yrs.	1916	Inc.	Dec
Boyd	18	27	9	0
Carter	179	16	0	3
Elliot	3	1	0	2
Greenup	11	12	1	0
Johnson	10	9	0	1
Lawrence	6	14	8	0
Lewis	6	10	4	0
Magoffin	7	9	2	0
Pike	11	14	3	0
Total	91	112	27	6

TENTH DISTRICT.

Av. M'b'rship			
County	5 Yrs.	1916	Inc. Dec
Bath	10	9	0 1
Breathitt	7	9	2 0
Clark	24	20	0 4
Estill	4	3	0 1
Fayette	67	70	3 9
Knott	2	0	0 2
Lee	6	9	3 6
Letcher	4	9	5 0
Madison	19	21	2 0
Menifee	1	2	1 0
Montgomery	16	16	0 0
Morgan	6	4	0 2
Owsley	5	6	1 0
Perry	7	11	4 0
Powell	8	8	0 0
Rowan	6	8	2 0
Wolfe	9	7	0 2
Total	201	212	23 12

ELEVENTH DISTRICT.

Av. M'b'rship			
County	5 Yrs.	1916	Inc. Dec
Bell	35	31	0 4
Clay	10	9	0 1
Harlan	7	11	4 0
Jackson	4	5	1 0
Knox	16	17	1 0
Laurel	14	11	0 3
Leslie	4	5	1 0
Whitley	23	27	4 0
Total	113	116	11 8

Many of the older county secretaries send in the minutes of their meetings regularly. Some of them, however, neglect this very potent means of increasing the interest of the individual members. It is a matter of pride in most counties for the good discussions to be quoted in the JOURNAL and be made a permanent record.

One of the most important developments of the year has been the enactment of the workmen's compensation law. The Board appointed by Governor Stanley is building its plan of operations on a very broad foundation. Dr. Milton Board of Louisville, medical referee of Jefferson County, has been made the medical director under the law, and they have secured the services of the distinguished statistician and expert, Dr. I. M. Rubinow, of New York, to assist in arranging the rates and regulations under which the law will be worked out. This law is the beginning of a step toward health insurance which is sure to come, and the Association should arrange to give the officials in charge of it all the help and support we can, with the end of making it as beneficial as possible to its beneficiaries. At the same time the material interests of the profession should be guarded in such a way as provide that there shall be no decrease in the income of competent men in general practice.

At the recent meeting of the American Medical Association in Detroit, two very important steps were taken over the strenuous objection and formal protest of your delegates, to which we desire to again call your attention. Amendments to the by-laws changing the order of business technically provided

that no new business can be introduced unless it be done by one of the Councils, standing committees or the Board of Trustees. Such a provision is arbitrary, undemocratic and opposed to the best interests of the profession. The mid-winter meetings in Chicago have already become cut and dried affairs, quite as profitable to those who stay at home and read their carefully censored proceedings as to those who attend. Responsibility in the conduct of any organization must devolve largely upon a few individuals, but whenever the time comes that these individuals feel that they should control the thought and action of the body exclusively, their usefulness is ended. The adoption of this by-law will prevent the acceptance of membership in the House of Delegates by our best men and will, I fear, be subversive of all that is good in our parent organization.

Another and even more important amendment was the one providing for appeals on questions of law to the Judicial Council of the American Medical Association. Naturally, it will be some time before that element of the membership that would abuse such appeals will find out about it, but such a movement as this means, if the experience of medical and other organizations having similar provisions amounts to anything, that it will not be many years before most of the time and money of the Association will be expended in trivial trials over technicalities that amount to little or nothing when decided. So far as is known the Judicial Council has had before it three or four of the most distinguished men in the country for trivial offenses against imaginary standards. I desire to respectfully submit that this Council, composed of great, constructive medical statesmen, should be devoting its entire time to practical solutions of the great problems that confront the profession, and the penalties and discipline should be left to the state and county societies where they belong under our plan of organization. The delegates from Kentucky feel that these amendments were not legally adopted, and we formally announced that the decision of the Judicial Council on appeals from the Kentucky State Medical Association will not be accepted by it. This matter is of such importance that we desire to request your formal approval or disapproval of the position of our delegates.

It is my sad duty to take official note of the death during the year of our beloved president-elect, Dr. Ap Morgan Vance. No word of mine could add to the fame of this simple, great physician. During the year death has also robbed the Association of two of its honorary members, Drs. W. L. Rodman of Philadelphia and John B. Murphy of Chicago. To both of them we were deeply in-

debted for much of the success of our work.

In conclusion I desire to express cordial appreciation of the cooperation of practically all of our county secretaries in the routine work of the year which they have carried on so well. Upon our county secretaries and effective councilors is practically the burden of our organization. The society is a failure or a success in proportion as the secretary does his arduous duties.

To the officers of the Association and to the whole membership, and especially to our very efficient stenographer, Miss Clyde Howell, I desire to extend my gratitude for the assistance and courtesies which have made the duties of my position unusually pleasant since my last report.

Respectfully submitted,

A. T. McCORMACK, Secretary.

REPORT OF THE BUSINESS MANAGER.

As the JOURNAL is owned and managed solely by the members of the Association, no outsider having a dollar's worth of interest in it or a voice in the direction of its affairs, the following tabulated statement should be of interest to every member as it shows what the JOURNAL has accomplished:

	1915	1916
Number of pages of reading matter	689	712
Number of advertising pages	420	381
Official Announcements	40	15
Editorials	72	77
Scientific Editorials	28	17
Book Reviews	42	51
County Society Minutes	112	84
Original Articles	167	164

HOW THE JOURNAL IS MAINTAINED.

The entire cost of printing, distribution and other expenses incident to the work of placing the JOURNAL into your hands every month, has been paid from the funds received from your advertisers. To meet the growing demand of the county societies and to continue to be able to publish every article that comes to the office, as we have always done in the past, it is necessary not only to secure more advertisers but to patronize those we have.

EXHIBITORS.

A brochure containing the floor plan, price list, and a description of the place of meeting was mailed to every reputable manufacturing firm in America with the result that we have secured a most creditable display. These exhibitors have gone to a great expense to show you the newest in their line and we earnestly urge you to save your orders until you can see if what you want is represented in the exhibit hall.

INDEX.

The index will, hereafter, be published in the December issue. This was arranged for

the convenience of those who have their JOURNALS bound. All articles are indexed under the proper heading and cross-indexed under the most important word of the heading used in the JOURNAL so that ready reference to a subject is facilitated.

Each month's proceedings of your county societies are listed so that a file of the JOURNAL can be used for the official records of the secretaries. Names of all physicians who have contributed in any way to the JOURNAL are also included in the index.

HOW EACH COUNTY SOCIETY HAS HELPED THE JOURNAL.

Every article and County Society report sent to the office has been published as is the policy of this Journal. The department of the Forum is open to every member for publication of criticisms and commendations of what appears in its pages. The following statistics are published to show the activities of the component societies and what each has contributed towards making the JOURNAL a true report of the profession of the State.

County	Minutes		Original Articles	
	1915	1916	1915	1916
Adair	0	0	1	0
Ballard	0	0	0	1
Barren	4	6	2	2
Bath	3	0	0	0
Bell	2	1	0	9
Boone	5	0	2	1
Bourbon	1	0	0	0
Boyd	0	0	1	1
Boyle	1	2	1	0
Breathitt	1	1	0	1
Breckinridge	2	1	0	0
Bullitt		0	0	2
Caldwell	1	1	0	0
Calloway	1	1	0	1
Campbell-Kenton	0	0	16	6
Carlisle	3	3	2	10
Carroll	0	1	0	0
Christian	7	6	5	4
Clark	1	4	0	0
Clay	3	1	0	0
Crittenden	1	1	0	0
Cumberland	1	0	0	0
Daviess	3	3	9	9
Eagle Valley	2	1	0	0
Fayette	0	1	2	8
Fleming	0	0	2	0
Floyd	1	2	0	0
Franklin	6	0	0	1
Fulton	0	1	0	0
Garrard	2	1	0	0
Grant	0	1	0	0
Graves	0	0	0	1
Grayson	0	0	0	1
Green	0	0	0	1
Greenup	4	2	1	2
Hancock	0	0	1	0
Hardin	0	2	0	1
Harlan	0	1	0	1
Harrison	3	5	1	2
Henderson	0	2	1	0
Henry	0	0	1	1
Hopkins	0	1	0	1
Jefferson	0	1	85	64
Johnson	1	0	0	0
Knox	4	0	0	0
Larue	0	0	0	1
Laurel	1	1	0	2
Letcher	0	0	0	1
Lewis	0	1	0	0
Lincoln	0	0	0	3
Lyon	2	3	1	0
McCracken	2	0	4	7
McCreary	1	1	0	0
McLean	1	0	0	0
Magoffin	1	0	2	1
Marion	0	0	2	1

Marshall	0	0	0	1
Mason	1	1	0	0
Mercer	0	0	1	1
Montgomery	1	0	2	1
Nelson	1	1	1	1
Oldham	1	0	3	0
Owen	3	0	0	2
Pendleton	5	4	7	3
Perry	0	1	0	0
Pike	1	1	0	0
Pulaski	0	3	0	0
Robertson	1	0	0	0
Rockcastle	0	1	0	0
Rowan	1	1	0	0
Russell	3	1	1	0
Scott	2	0	1	1
Shelby	3	1	1	1
Simpson	1	0	0	0
Spencer	0	0	3	0
Taylor	6	3	0	2
Todd	1	1	0	0
Trigg	0	0	0	1
Muldraugh Hill	4	2	0	1
Union	0	0	1	0
Warren-Edmonson	2	0	3	2
Wayne	1	0	0	0
Webster	1	0	0	0
Whitley	1	1	0	1
Wolfe	0	1	0	0
Woodford	2	2	0	0
Total	112	84	167	161

Respectfully submitted,

L. H. SOUTH.

Industrial Insurance—"Bills for compulsory health insurance for workers were introduced into the Massachusetts legislature, January 14, and the New York legislature, January 24. These bills, which have been drafted by the American Association for Labor Legislation in cooperation with the special committee appointed by the American Medical Association, will cover any case of sickness or accident not within the scope of the Workmen's Compensation Act, and will apply to manual laborers and all others earning less than \$100 per month. Benefits to insured workers will include medical, surgical and nursing attendance, medicine and surgical supplies, cash benefit for a maximum of twenty-six weeks of the year, and a limited funeral benefit. Local health associations created under the proposed act for the administration of those benefits would be under the joint control of employers and insured employees. The bills as drafted represent the results of a three years' exhaustive study of health insurance by the special committee of the American Association for Labor Legislation. Much of the best informed opinion of the country is in favor of these proposals. The United States Public Health Service, various departments of health, labor leaders and others strongly advocate health insurance. The introduction of these bills marks the inauguration of a great movement which ought to result in an improvement in the health of the industrial population and improve the conditions for medical service among the wage earners. It is the duty and the privilege of every physician," says The Journal of the American Medical Association, "to study this important question and to express his opinion either to the committee appointed by this Association or to the American Association for Labor Legislation."

ORIGINAL ARTICLES

EMPYEMA.*

By PHILLIP F. BARBOUR, Louisville.

Empyema is one of the most annoying diseases with which the practitioner has to deal. When one has treated a pneumonia with the utmost skill and success it is exasperating to say the least to have the patient, after an apparent cure, sink back into a fever that is often most obscure in origin and unexplainable at the time. Medically or surgically we like for our patients to get well and stay well and not develop symptoms that are hard to account for, and delay recovery.

Empyema may arise from a number of different sources, and in fact may follow any infection with pus organisms, but by far the most frequent cause is a pleurisy which has followed a pneumonia. Cases may come from external injuries or diseases of the ribs or spinal vertebrae, or scarlet fever or certain other of the infectious diseases may carry a contagion to the pleural membrane. Perhaps a few cases owe their origin to a purulent pericarditis, but it is far more frequent to have the infection pass from the pleural sac to the pericardial than vice versa. It may result from extension of infection from below the diaphragm because of the flow of lymph, etc., through the diaphragm is toward the pleural cavity. Perinephritic and perihepatic abscesses are apt to be complicated by a purulent pleurisy. But, however, interesting these rare sources of infection may be, the common type of history will record the familiar grouping of a pneumonia followed by pleurisy which, in turn changes into a purulent pleurisy or empyema. This tendency to the engrafting of pus upon a pleurisy is far more common in children than in adults. A serous pleurisy may persist in the adult for months at a time. The essayist recalls a case in which the pleural effusion remained purely serous for six months, but such a result will not be found in children. Here the tendency towards infection with some purulent organism is so strong that the planting of the pus organism is apt to occur very early. Some writers have stated that no pleurisy remained sterile in young children longer than a week. While this seems an extreme statement the experienced pediatricians leads them to the opinion that pleurisy pure and simple remains so only a very short time in children. It might be possible that the pleurisy will begin as a purulent rather than a serous pleuritis. But the empyema is far more apt to develop in a serous pleural effusion.

*Read before the Jefferson County Medical Society.

It is thought that pleurisy and empyema are rather more frequently terminal to pneumonia in children than in adults. And the explanation is not difficult. Infections and inflammations of the respiratory tract are far more common and fatal in children than in adults. Nearly sixty per cent. of the deaths in children are recorded under the caption of respiratory involvements, and now that the feeding of young children has been so carefully safeguarded and the milk supply so much purer and cleaner we are seeing less and less of intestinal disorders. The laity and the physician as well have not waked up to the contagiousness of colds and are not careful to protect the young from infections with the various organisms which are associated with infections of the respiratory tract. Hence it is that coryzas and croups are followed by bronchitis and pneumonia.

It is thought that pleurisy will follow only those cases of pneumonia in which the more superficial air cells are involved. It is difficult to understand how pleuritis can supervene unless those lobules are involved whose connective tissue is continuous with the connective tissue entering into the wall of the visceral layer of the pleura. It is said that every case of pneumonia will have some pleural complications but that involvement can hardly amount to much unless there is a superficial range of air cells which are attacked. Now the pneumonias of children are distinctively of the type of broncho pneumonia. Which means among other things the involvement of the very terminations of the bronchioles. And specialists in children's diseases have noted the far greater frequency of pleurisy and empyema following broncho-pneumonia in children as compared with the adult.

Another fact here has an important bearing upon the empyemata and that is the character of the organism which is present. We appreciate the fact that the usual type of pneumonia in the adult is caused by the pneumococcus which will produce a characteristic type of fluid in the pleural effusion, namely the greenish tinged serous liquid. In the broncho-pneumonia of children we shall find a number of organisms among which the pneumococcus is not always the most frequent and which may not be the predominating type of germ at all. We shall find streptococcus and staphylococcus mixed in varying proportion with pneumococci and very rarely the tubercle bacillus. It is then the mixed infection which has caused the broncho pneumonia which does not rest with a pneumonia but which must extend on to a purulent pleurisy. The type of organism has much to do with the severity and intractability of the empyema. A pure pneumococci infection of

the pleural effusion will often be absorbed after a simple aspiration and probably often when the pleural cavity has not been entered at all. On the other hand one would not expect a staphylococci or streptococci infection to heal otherwise than after drainage. But when the tubercle bacillus is found we realize the impotence of any treatment however much we may delay the final outcome. Fortunately tubercle infection as a cause of pleuritic effusion is as rare in children as it is common in adults.

The prevention of empyema calls for the most earnest efforts to stop all infections of the respiratory mucous membrane. It calls for the careful treatment of those little coryzas which are potential of great harm in the young. It calls for active treatment of the bronchitis and the pneumonia and the watching especially when great pain is observed in any case of pneumonia for pain is the evidence of the extension to the pleura.

The recognition of fluid in the chest of a child is not difficult if one does not apply adult standards. One of the differential points insisted upon by the older professors to diagnose an effusion was the absence of sound transmission below the level of the liquid. This is absolutely fallacious in children's chests. For often the sound is transmitted to the ear clearly as typical bronchial breathing.

Egophony may be heard at the level of the liquid but not always, but below the level the breath sounds will usually be somewhat fainter as if one were listening through a thicker wall. The sounds are often distinctly bronchial such as would be heard over a pneumonia itself. In fact one is sometimes led to think there is probably a delayed resolution which continues the typical bronchial breathing. Whatever may be the case in adults unresolved pneumonia may practically be left out of account in the differentiation in children as may also the great thickening of the parietal pleura which is met with very rarely even in adults.

Far more certain in children will be the pressure signs from the presence of the liquid, for the tissues of children are softer, the muscle tonus weaker, the relaxation of the parts and the adaptability to the new relations more evident. Thus we find that the heart is displaced to the opposite side. The liver or spleen is forced down noticeably. Perhaps it would be well to say here that one should know accurately the positions of these organs which are not exactly the same as in adult life. The mediastinum will also show a variation in its outlines, a bending to the opposite side. Grocco's triangular area of dullness at the base of the lung near the vertebrae but

upon the healthy side is a valuable confirmatory finding. Percussion resistance will give the practiced hand invaluable information. But one can not rely upon the art of percussion as learned upon the adult to help much in children. There is more delicacy, more finesse, in the handling of the little baby whose whole peritoneal cavity will sound to the usual percussion of even the good diagnostician. The coin test may be helpful in cases of doubt but the auscultatory findings have more often served to confuse rather than to help in the diagnosis. There will be some flattening of the chest wall and lack of movement, but children's breathing is much more abdominal than costal, with less range of movement of the chest wall so that the limitation of movement is not very noticeable.

The history will be most illuminating for one can always trace back to a pneumonia with more or less severe pain, and then a period of a few days when everything seemed to be all right and then a rather characteristic grouping of symptoms: chilliness, if not rigors, and fever at irregular times, sweats, anorexia, weakness, progressive cough, hard dry and ineffectual, emaciation. With such a record one can not go far wrong in aspiring to confirm the diagnosis and locate the effusion. It has been the essayist's experience many times to find that empyema was sacculated; several punctures might be necessary to find and evacuate the collection of pus. When pus is found it must be evacuated for there is no way by which it may be absorbed. If the effusion is found to contain only pneumococci simple aspiration has been found to be followed by complete absorption. But very few will be found of such pure type of infection and so drainage must be secured. The majority of the surgeons prefer resection of a rib in these cases, though pediatricists are in favor of simple incision where possible to secure free drainage so as to avoid some of the dangers which attach to the resection of ribs which is more dangerous to the young child in proportion to its youth.

When recognized early and treated properly the mortality is not high and, in fact, is far less than one would expect in the presence of such extensive avenues for the absorption of pus but my surgical friends often forget that valuable aid may be extended these children by the administration of suitable medication, feeding and physical exercises.

Long delay in relieving the empyema allows a thickening of the parietal and visceral pleura. Lymph is thrown out which becomes organized into firm bands which bind down the lungs and prevent expansion even after the chest has been opened freely. In such cases the cavity must be filled or the thorax

be twisted and contracted to the size of the lung so that permanent deformity results. Operations such as Estlander's are disfiguring and severe even when successful. Some advantages have been claimed for an operation in which the fibrous tissue is removed from the pleurae along with the adhesions of the two layers. Such operations can only leave results which are undesirable even if life is preserved. They emphasize the importance and necessity of early recognition and quick demand for surgical intervention.

METASTATIC INFECTION OF BONE.*

By C. B. SPALDING, Louisville.

Most of the credit for advance in the treatment of joint lesions, for the past ten years must rightfully be placed with Dr. John B. Murphy of Chicago, who so clearly and definitely elucidates not only the cause of these diseased areas, and the result of early and skillful treatment, but the surgical relief for neglected cases.

We are prone to treat all cases of joint involvement on the expectant plan and simply label it "Rheumatism," which in many instances, means nothing definite, and causes that inaction on our part, which may mean, a crippled limb for the patient. How many ankylosed joints, suppurative bones and joints, and how many amputated limbs have gotten their early treatment under the caption of "Rheumatism" would be hard to estimate.

It is not an easy thing to take up a new theory of some one individual; drop all our old stereotyped ideas and accept a brisk active treatment with a "reason-why," along entirely new lines. And I think to do such a thing, would be foolish; except when a careful study of such "ideas" lead you to the conclusion that they are correct, and have been proven so, at least satisfactorily to one's own mind.

Looking back over the history of surgery, we find that there was a time when amputation was considered the proper course in many cases of trauma and disease, and being able to amputate with ease and success was considered a great art; but nowadays an amputation is the last thing to be considered, and as long as there is any resource at all left along the lines of repair and conservation of tissue, whether it be by bone-graft, tissue graft, tendon transplantation, blood-vessel suturing or what-not, such resources must all be exhausted before the last final step is taken. It has been rather adequately expressed, I think, that "anybody can amputate, but it takes skill and patience to restore." Again, look back over the history of appendicitis, how reluctantly we accepted the modern treat-

*Read before the Jefferson County Medical Society.

ment. Some twenty-odd years passed before the modern theories became acceptable to the profession and the laity; until now we rarely hear proven facts along that line treated with scorn.

Why should we be slow to accept the new theories of joint involvement when they are based on logical facts, demonstrated, and proven along scientific lines, not only in anatomy and physiology, but bacteriology and pathology, and backed up by results, too many to admit of doubt?

If there is an inflammation, there must be an infection; and if there is no local avenue, the original site of entrance must be looked for at some other point. Careful study of the history will undoubtedly locate the original site of entrance, and a bacterial study of the involved areas will prove true as well as a clinical study and treatment of the entrance site will prove of benefit to the terminal condition.

As in other bacterial invasion, the amount of damage depends upon the virulence of the invading bacteria, the patient's resistance, and the amount of intra-joint pressure, either from accumulated fluid or muscle contraction.

The original site of infection may be located anywhere on the cutaneous or mucous surfaces, but a frequent site is the throat, nasopharynx, tonsils, etc.; often the mouth, decayed teeth, and other buccal sources of invasion. The genital tract has long been recognized as a source of joint involvement, and Neisserian rheumatism has long been generally accepted. Furunculosis is a favorite source of septic infection; there are many others, too numerous to mention, including the acute infectious diseases.

The extra-lowering of resistance of an area by trauma when infection is already being battled with in the circulation, seems to be a causative factor in the localization in certain areas. Not infrequently the patient will think that a fall or blow to a joint is the only trouble, and will be inclined to take the situation lightly, and it may prove rather hard to persuade them of the gravity of their condition.

A review of our anatomy and physiology recalls to us how easily it is for bacteria to travel from one point to another by the aid of the circulatory system. Then if we have a given avenue of infection, and this infection is once set loose in the circulation, it will almost surely attack the least resisting areas.

Upon the virulence, lack of resistance, etc., as above enumerated, must depend the outlook for the patient. It has been observed, that where a joint involvement has been preceded by a chill and high elevation of fever, 103 de-

grees or more, the destruction of the joint is almost inevitable, and usually, in spite of all treatment, the patient must finally resort to arthroplasty or remain a cripple. This form of invasion is usually streptococcic, the other forms of bacterial invasion usually come in with the milder symptoms and are amenable to treatment in a greater proportion. The primary infection may be present for a long period before the secondary invasion.

The joints are nearly always attacked in the submesothelial layer of the synovial sac, in which area, is to be found the greatest amount of arterial and lymph channels, the inflammation causing an increased secretion of fluid in the synovial sac, in most instances, days or weeks before the actual invasion of the sac by the bacteria. Streptococci, however, invade more rapidly than any of the other bacteria, sometimes entering the cavity in a few hours after the secondary implantation. In contrast, tubercle bacilli may be weeks or months present in the sub-serous tissue before they may be demonstrable in the fluid of the joint.

The only treatment of these metastatic invasions consists in extension, separating the bone ends, aspiration of the fluid, and injection of some kind of fluid that will prevent the bacteria entering the joint. An antiseptic is not called for, because as yet there are no bacteria in the cavity. Such a fluid has been found that will produce a thickening, and assist in cutting off the entrance of the bacteria; it is a 2 per cent. solution of formalin in glycerin. By frequent aspirations and injections through the same needle, in conjunction with a Buck's extension, rest and quiet in bed, and the autogenous vaccine corresponding to the original infection, most such cases, especially if mild, will clear up in three or four weeks. Never use a cast or fix the leg in any way, as the process of repair in such processes is phagocytic, and you would only assist a bony union of the denuded surfaces of the adjacent bones. In contrast, a tubercular joint should always be fixed in a cast, as the process of repair is entirely different, the invading bacteria being slow of action and taken care of by encapsulation.

In summing up the situation, I should like to quote from Dr. John B. Murphy, February 1914 *Clinic*. "It is my conviction that every type of non-traumatic joint inflammation is a metastatic manifestation of a primary infection in some other portion of the body. It is my further conviction that there is no idiopathic rheumatic arthritis, any more than there is an idiopathic peritonitis."

In conclusion, I wish to report an interesting case, which may help to illustrate some of these points:

On October 27th, 1912, I was called by Dr. Ewing to see F. N., a boy 8 years old, who had received an injury to his right knee, from falling on the cobble-stones in an alley, the previous day. Soon after the accident he had a chill and Dr. Ewing had found him with a temperature of 104 degrees. However, at this time his temperature was down to 101 2-5, and his general condition was not such as to cause alarm. A rather slight, under-developed boy of the mouth-breathing type, complaining of no pain except upon moving the injured leg, presented. The local condition showed no abrasion whatever to the skin of the knee, though the knee was slightly swollen and red, and quite painful on palpation and motion. No other skin or joint lesions were found. At this juncture of the examination, the father interrupted by stating that, "it was too bad the little fellow got hurt for they were considering having his tonsils removed." Immediately the mouth and throat were inspected and large tonsils and adenoids, reeking with foul discharge, presented. A diagnosis of metastatic bone infection, probably originating from chronic throat infection, was made. The gravity of the condition was explained to the parents, who, fortunately, were most sensible and willing to abide by our judgment, and the child was at once sent to the Children's Free Hospital. A careful explanation of the possibly long illness, the multiple joint involvement that might show up later, and the probability of repeated operations, if they would have us do the best for the child, was made. This was fortunate as later it proved convincing to the father and re-established his confidence, and gave us that latitude that is such a handicap if not obtained. On arriving at the hospital, the father phoned me that upon handling the child two other joints had hurt him, his left wrist and left ankle, further proving the diagnosis. On arriving at the hospital at 5 P. M. October 27th, 1912, his temperature was found to be 101 2-5 degrees, pulse 130. A cleansing bath was given and an ice bag applied to his head, and hot applications to the knee. At 8 P. M., temperature was 103 degrees, pulse 120. October 28th, his temperature ranged from 100 degrees at 2 A. M., to 101 degrees at 1 P. M., and down to 99 degrees at 10 P. M., with a pulse of 112. Salicylates were given, hot packs kept up. October 29th, his fever ranged from 99 degrees to 100 2-5 and pulse 112. From that date until November 1st his temperature range was from 100 degrees to 101 2-5 degrees and pulse 112 to 100. At this time an oedema of the right inguinal region showed up, penis and scrotum swelling enormously, inguinal glands enlarg-

ed, and area of redness extending down right thigh. Hot applications were applied over this entire region. During November 1st, his temperature ranged from 99 2-5 to 101, pulse 120 to 104. The right knee had continued to increase in size and the inflammatory process seemed extending down the inner side of the leg. The joint was aspirated under aseptic precautions, and the specimen examined by Dr. John Allen, who reported a pure culture of the staphylococcus variety. Meanwhile, the left ankle and wrist had swollen slightly and seemed to stay at that stage, only causing pain on pressure. The results of the lymph stasis were astounding, and gangrene of the penis seemed imminent. Urinalysis showed albumen, hyaline and granular casts. Emaciation was extreme for so short a period. A culture from the throat was made by Dr. John Allen, and a mixed infection, the staphylococcus largely predominating, was reported. The family history was negative relative to tuberculosis and syphilis.

On November 2nd, 1912, at 3 P. M., under gas-oxygen anesthesia given by Dr. Heim, an incision to the inner side of the tibial tubercle, and below the joint, was made, as already the joint cavity had ruptured and the pus was burrowing down the muscle planes, and I did not wish to jeopardize the joint by placing drainage directly through its boundaries. Through this incision great quantities of pus and sloughing synovial sac were expressed, until it seemed that certainly very little sac could be left. Then a parallel counter incision was made and a rubber tube passed through. A Buck's extension from the knee down was applied, also hot applications over the knee and incisions, and the child was returned to bed, and 18 pounds of sand attached to the extension.

November 3rd, his temperature ranged from 98 3-5 to 101 3-5, pulse 104 to 124, voided 14 1-2 ounces urine. November 4th, about the same condition existed. November 5th, autogenous vaccine, made by Dr. Allen, was given. Temperature ranged from 98 2-5 to 99 3-5, pulse 100 to 112, urine increasing in quantity. November 6th and 7th, temperature ranged from 98 to 100, pulse 100 to 124, swelling in genitals and inguinal region markedly decreased. November 8th, no change. November 9th, second dose of vaccine was given; temperature normal all day, pulse 92 to 98, about all traces of lymph stasis gone. From Nov. 10th on to November 24th temperature ranged about 98, occasionally 99 and 100, pulse about 100. Regular diet was now ordered as frequent urinalysis showed that the kidneys were no longer irritated. An iron tonic was given. The left wrist and angle re-

mained slightly swollen and tender on pressure. All through December his general improvement was good, eating, sleeping, no pain, knee joint gradually improving and incision nearly healed. Extension still in use. Temperature normal all the time except an occasional evening elevation of 99, pulse about 100.

Improvement in his general condition seemed to continue on up to the 20th of January when his wound had entirely healed, leaving good motion in knee joint. The left wrist and ankle were about the same. Extension was removed and he was put on crutches, but the leg below the knee swelled more than an ordinary venous congestion should cause, so an X-ray was made, revealing an extension of the bone disease almost to the tibial malleolus, none of which had ever caused the child any pain.

His general condition now being good with reference to nutrition and elimination, it was agreed that he could stand an operation of some length, and a general clean-up was decided upon. Realizing that sooner or later the two more or less quiescent joints would have to be given assistance.

On January 28th, 1913, under general anesthesia, the right tibia was opened from tibial tubercle to malleolus, pig-troughed, curetted thoroughly in the shaft of the bone where there were many perforations giving the bone a honeycombed effect, until only a thin shell was left. At the epiphysis little was done other than extend the drainage well into the head of the tibia where you could feel the soft underlying structures of the joint cartilage.

Fearing a total destruction of the epiphysis and subsequent failure of growth, also realizing that later on after nature had reinforced the remaining healthy areas, a further curettement could be done with less sacrifice to the growing end of the bone. The skin edges were sewn to the peritoneum, thus insuring free drainage and easy access for dressings. The leg was supported with a heavy leather splint. The muscles over end of the radius were separated carefully, not cut, and the bone exposed, opened, and was found to contain pus in a cavity, representing the size of the bone, all of which was evacuated and curetted, directly to the underlying structures of the joint. This was packed and splint applied. Then the left fibula near its malleolus was opened, drained of pus, and honeycombed areas curetted. Wound was packed and dressed then, and patient returned to bed. (Dr. Pfingst rapidly removed his tonsils and adenoids).

He reacted nicely and pulse ranged from 80 to 110. From that date on his temperature

and pulse rate showed nothing of interest. The dressings consisted of irrigation, painting with 2 per cent. iodine, drying and using a pack of Balsam of Peru. No pain was ever felt from the dressings, at least none sufficient to cause the child to cry. These dressings continued throughout the spring and summer of 1913. The tibia gradually replaced itself. Further curettements of diseased bone were done on April 7, 1913, May 25th, 1913, and July 2nd, 1913, under general anesthesia. The first week in October, 1913, found him greatly improved; only a small cavity in the head of the right tibia as yet unhealed. He was able to walk perfectly, no interference with the functions of any of the joints. So he was allowed to go home, only two weeks lacking to complete his entire year in the hospital.

The unexpected did not occur, and as is usually the case, in these bone diseases, repair takes place comparatively fast until only a small area is left; then this small area consumes months and months of coaxing to finally effect a cure. I dressed and treated this small area throughout the fall of 1913 and spring of 1914, only to see it apparently heal, and then reopen, time and time again; using iodine, occasionally curetting lightly, packing and every other means I could employ. Finally on July 7th, 1914, at St. Joseph's Infirmary, under general anesthesia, I again thoroughly curetted the area in the head of the tibia, the patient leaving the hospital at the end of one week, since which time I have continued treating the wound. I finally succeeded in getting it entirely cured, in which condition it has been for about two months.

The patient is entirely well, as is shown both by physical examination and X-ray picture of the bones. He has perfect motion in all joints, and though he has grown about five inches there has been a perfect protection of the epiphysis as is shown by an existing normal length of bone.

Hygiene in the Field.—Among the various measures enforced or contemplated to keep the troops in health, Kuhn and Mollers mention that it is the plan to repeat the anti-typhoid inoculation after a five month interval. Every tuberculosis suspect is sent home, and careful search is made through the civilian population for consumptives and suspects, and they are isolated in the public hospitals if possible. When this cannot be done, they are left in their homes; the houses are placarded and all intercourse with soldiers is prohibited.

MONSTROSITIES AND CONGENITAL DEFORMITIES.*

By CHAS. K. BECK, Louisville.

This is a subject that covers so much ground that I shall discuss only causation and prevention.

Maternal impressions since the time of Hippocrates, and probably before, has been a convenient blanket to cover up our ignorance of the real condition producing the unhappy results. And even to-day we cannot dismiss this phase of the subject without some discussion. The time will probably come, when the influence of maternal emotions during pregnancy will be definitely known; but our present knowledge of the subject is very little in advance of that of the father of medicine. In the annals of medicine there are so many instances where maternal impressions have, seemingly to the observer, been definitely proven, that we cannot dismiss the subject as being altogether absurd. But just how or why the emotions of the mother should affect the physical anatomy of the offspring, while in utero, we cannot tell. We must admit that such is probably possible. Her mental state modified by shock, worry, deprivation, etc., may produce vascular and nutritional disturbances in the endometrium, that may modify the development of the ovum.

We are not in position to deny that paternal impressions may not have some bearing. A fact even more improbable is that of telephony. How a former deceased husband could influence the offspring of a wife married a second time, nobody has undertaken definitely to explain. Theories have been advanced. Possibly the mental status of both the second husband and wife at the time of intercourse and during the pregnancy is the most plausible. We remember that Jacob knew something of the influence of mental status at that time. Telephony, never-the-less, is a fact that breeders have recognized many years.

When we approach the subject of intra-uterine disease, as a causative factor, we are getting on somewhat more familiar ground. Smallpox, measles, malaria, and pneumonia may be transmitted through the placenta. The role played by syphilis is fairly well known and is a large one. Tuberculosis is thought to rarely have any influence. Besides these transmitted diseases the fetus has a pathology that arises definitely within itself uninfluenced by the mother.

Disease of the nervous system, the skin, bones, abdominal organs, kidneys, and urinary apparatus, circulatory system, genital system, and organs of special sense are some

of the causes of deformities. In the specimen which I have here, bilateral congenital cystic kidneys were prominent as a cause in the production of the monstrosity, while hypoplasia of the brain tissue and of the cranial vault also occur, the nural canal failing to close at the anterior end. This was the fifth birth to this couple, and all are dead except two, which are delicate. The mother had a mitral regurgitation which may be congenital and the maternal grandmother had had paralysis agitans for years.

Heredity certainly has great influence. As an instance we recall the fact that supernumary digits occur frequently as a family trait for many generations. Certain drugs like lithium, sodium, magnesium, and potassium have been found to have a special selective action on certain cells during the morula stage, producing characteristic monsters. By treating the eggs of the minnow with solutions of magnesium chlorid, Stochard and Lewis produced 50 per cent. of Cyclopean monsters. Some of these chemicals circulating in the mother's blood as a result of the metabolism of her own body may be a cause. Doubtless some of these drugs are administered by the physician in charge or taken by the mother without consulting her physician in ignorance of the possible result.

Contracting hands or membranes of organized lymph and coils of the funis may produce paralysis, amputation, and other deformities. Direct trauma to the abdomen of the mother may occasionally result in some deformity. Amniotic adhesions have been blamed.

It occurs to me that probably the real first cause in most cases lies back in one or both of the parents pronuclei at or before the time of their union. Possibly sometimes the female pronucleus fails to protrude one or both polar bodies. While the male pronucleus, if it gains entrance prior to maturation, which it has been known to do, usually remains inert till maturation occurs, who can say positively that it always refuses to fuse with the female pronucleus until the polar bodies have been extruded? Possibly under the influence of alcohol or some other drug or modified by general or local disease of the female, maturation may be partial, excessive, or lacking, altogether. Irregularities may occur also in the spermatozoon. While only the head is usually allowed to enter the ovum, who is prepared to deny that the body and sometimes the tail gain entrance? Ova have been anesthetized experimentally and while in that state have been found to admit more than one spermatozoon. Unequal division of the female pronucleus and abnormal development resulted.

We have observed in tumors frequently un-

*Read before the Jefferson County Medical Society.

equal division of the chromosomes during mitosis. Whether this is a causative factor in the production of the tumor or the result of some other factor which is causative is not at present known. But we do know that under normal conditions these chromatin loops divide into two equal loops. Now if this unequal division can be demonstrated to occur after birth in cells that have reverted more or less to their embryonic characteristics, how much more likely that in the early days of intra uterine life this unequal division of the chromosomes may occur and result in all kinds of monstrosities and deformities? We have found that chromosomes are of sufficient importance to have a life history of their own, because they possess a personnel sufficient to determine sex and hereditary characteristics.

As drugs and chemicals have been found to modify development at the morula stage, might they not modify at any of the early stages? It is a well known fact that parents, being under the influence of alcohol at the time of coitus is a cause many times of mental deformities in the offspring. Other drugs have not been studied so carefully; but we cannot doubt their influence since we know that they do have an influence on the development of some fertilized ova.

Consanguinity deserves some mention as a possible cause of deformities. It is generally supposed to have more influence than has been proven by statistics. While statistics are very imperfect and often conflicting because of lack of thoroughness, still the conclusion drawn is that when there are tendencies pre-existing toward weakness, disease or deformities these tendencies are exaggerated. If there are no such tendencies the desirable traits are emphasized so that the results of consanguinity are simply to emphasize hereditary taints or virtues.

A review of the principal causes naturally suggests prophylactic measures. To be hampered for life by some preventable deformity or monstrosity is such a serious thing to the one so afflicted that I feel that the subject deserves careful consideration. I am not a believer to any great extent in the influence of maternal impressions received during pregnancy. I can see how a mental condition such as shock or fright might modify for a few moments the uterine blood supply, but I cannot understand how this will so effect the offspring as to injure it permanently in any way. But I feel that we as medical men are not in position today to taboo the idea. When asked by a patient about the advisability of care of the mental status of the pregnant woman, I, for one at least, advise carefulness, because it is not harmful advice and I am on the safe side. Paternal impressions strike me as being ab-

surd, and the influence of telegony is a curious one not deserving mention from the standpoint of prevention.

Certainly much can be done more than has been done toward the prevention of such diseases in the mother as may be transmitted to the ovum or fetus. I believe that disease of the fetal membranes, or endometrium is frequently if not solely the cause of amniotic adhesions, organized bands or membranes of fibrin, etc. So that prevention of these conditions come under the prevention of diseases transmissible by way of the placenta. The mother should be as carefully guarded from these diseases as she guards her child from them. She should remember that the exposure of herself means the exposure also of the delicate life she seeks to protect. Of course no syphilitic of either sex should be allowed to marry until a cure has been positively attained. When marriage or commerce takes place, and sometimes no power on earth can prevent it, conception should be prevented. A tubercular person should never become a parent unless health has been completely restored.

Over heredity, we have no power as yet.

My experience has been that the less we medicate our patients who are pregnant, the better off they are. But if medication becomes necessary, mineral salts should not be given.

Consanguinity should be advised against, in my opinion, though I believe it is frequently emphasized more than it deserves.

I desire to report in this connection a case of my own. On the maternal side, grandmother of the monster had had paralysis agitans four years; one aunt died at 18 months of spasms; one at 7 years of chorea; mother has mitral regurgitation; other maternal history negative. On the paternal side, history negative except that there was one set of twins who were still living and in good health. Two sisters living, delicate. Brother died at 3 1-2 years of pneumonia; was only child that had good health. Another boy died at two was a very delicate child. Another died at and one-half years old, following a fall. This five months from marasmus. All were bottle fed. The mother claims that during the second month she saw a boy crippled from tuberculosis of both arms and both legs. He was a hunchback and head and body were large. Could get no history of syphilis but no Wassermanns were made.

Dr. Doherty helped me in the delivery of this monstrosity. The placenta was lost in some way, so we were unable to exhibit it, but it was about three times the size of the normal and showed areas of degeneration probably fatty or calcareous.

The abdomen of the fetus measured 50 1-2

centimeters at the umbilicus. It was 46 centimeters long. Chest 31 1-2 centimeters at costal border and 26 1-2 centimeters at axilla. Circumference of head above ear 21 1-2 centimeters. Five centimeters of mass protruded from opening in vault. Opening measured 3x2 1-2 centimeters.

Microscopic examination showed bilateral cystic kidneys which was the cause of the great distension and the dystocia.

CASES OF INSANITY SELECTED FROM A LONG AND BUSY PRACTICE.*

By J. W. CRENSHAW, Cadiz.

As the President, Dr. Hatcher, has dealt with "The Classification of Insanity" I thought that it might be of interest to report the following cases from practice illustrative of some of the different phases of the disease. The details of each case as reported carries with it whatever feature there may be of special interest.

Going back over life's history to a period when I was not as painstaking as I feel that I now am, and when I was a little more rash in assuming responsibility, I call to mind a case of double cataract in a vigorous looking young mulatto man, "ripe for operation" as I diagnosed the case, and waiting for an ambitious young doctor to needle or extract.

THIS IS REPORTED AS ONE OF THE MISTAKES AND FAILURES.

The patient was operated on in an humble cabin, with no assistance except that of a colored woman and man, it being among, if not the first operation in the county under local anesthesia, cocaine having just then come into occasional use. The patient stood the operation without complaint, both lenses being removed at one sitting. The results were successful beyond my expectation, and I was congratulating myself on a favorable termination of this my second cataract operation. After bandaging the eyes while dressing the patient for comfort in bed, my attention was arrested by certain suspicious symptoms, which I am now free to confess should have been observed before. Had I taken the precaution to examine the urine, "this tale would never have been told." My patient was a diabetic. In less than 48 hours after the operation acute mania developed, and it was with great difficulty that the patient was restrained from injuring himself. He died in a short time from acute meningitis.

A CASE OF ACUTE MANIA IN TYPHOID FEVER.

This case is reported on account of some of the rare features connected with its history. Sudden insanity is not very common in typhoid fever, but of sufficient frequent occurrence to warrant special consideration by most writers who have written a "Practice of Medicine." This case developed so suddenly and with such violence, that I shall never forget the horrors surrounding the incidents.

A young man, about 21 years of age, a perfect athlete, after drooping around for about ten days was taken to bed. Fever did not run very high, and at the end of the first week, everything seemed to be going well, when suddenly, without warning, an intestinal hemorrhage came on, resulting in some, but not very decided prostration. The patient, however immediately changed from a garrulous condition which had characterized him from the outset of the attack, to an almost melancholic condition, remaining very quiet, without inclination to talk. I left him a few hours later in seemingly fair condition. A sudden call came, and as I entered the room the mother reported that without warning the patient began to grind his teeth, raising up in bed looking like a demon he had seized her by the arm, held on with a death-like grasp. Friends had released his hold, and he was again quiet. As I placed my finger on his pulse, the grinding of the teeth again began, and with almost superhuman strength he threw his arm over my neck and pulled me over onto the bed as if I had been a babe in his hands. It took the strength of a strong young man to liberate me. He dropped onto the bed, his eyes oscillating like a beast at bay, when suddenly he turned deathly pale and a most terrific hemorrhage came on, saturating the bed and running down onto the carpet, and in a short time he passed away from exhaustion.

A CASE OF SENILE DEMENTIA, WITH ACUTE SYMPTOMS, AGGRAVATED BY BUSINESS WORRY.

A number of years since I was called to see a gentleman of wealth and large business connections, who had met with some business reverses. My services were requested by the family because, as they expressed it, "We think, that he is losing his mind." A gentleman far down the third quarter of the period assigned as the limit of man's life, I had known him as a clear-headed successful business man. Rather reticent by nature and especially quiet when in company. As I entered the room he was pacing the floor having very much the appearance of a caged lion, moaning in a most piteous manner. As I tried to enter into conversation with him, I found that reason was dethroned. He was under my

*Read before the Trigg County Medical Society.

advice committed to a private sanitarium, where I saw him a year later bearing no resemblance to the strong, vigorous business man whom I had once known. He died a few years later in a state institution from general paresis, with softening of the brain. The lesson from this case is, the patient might have been saved to several years of usefulness if a "halt had been called" when he first began to show evidences of a "breakdown."

A CASE OF INSANITY WITH HALLUCINATIONS.

The following case is another in which a young man might have been saved had the necessary precautions been taken when the first symptoms developed. The case is this. A professor in a medical school, a young man of decided ability had a nervous break-down, from overwork. Having relatives in the town where I was then residing, he came for a rest. I called to see him to pay my professional respects, ignorant of conditions and was amazed to find him suffering from hallucinations which made it unsafe for him to be at large. I advised and insisted that he be put under restraint immediately. The family hesitated and delayed. One morning while taking his morning stroll, he dropped into the hotel of the town, and meeting a prominent lawyer accosted him, calling him aside, charged that he had been using "approbious epithets" regarding him. The attorney was of course shocked at such a charge and made every apology and explanation possible, but did not recognize the true condition of affairs. The patient left the hotel and came to my office, related in detail the attack on the lawyer, offering by way of illustrating his helpless condition, that he was utterly unarmed, except a large rock which he had concealed in his pocket with which he had intended to "brain the lawyer." This incident culminated matters. His friends were still unwilling that he should be committed formally and legally to an asylum, but consented that I might carry him to a private sanitarium. The trip was a long and tiresome one, and while on the car one night, while I was sitting across the aisle from my patient, talking to a young Kentucky doctor, without warning, he arose in his seat and rapped the young doctor over the head with a small rattan cane which we had permitted him to carry. I caught him, throwing him back into the seat, said to him: "You have acted very rudely, and you must apologize to the gentleman," which he did in a most gracious manner. He remained in the sanitarium to which he was carried about a year, and his family thinking him well enough to come home, a relative was dispatched to accompany him home. On the return trip, the

kinsman, who was the attendant, dropped off to sleep on the car. The patient watched for an opportunity, walked up and down the car peering into the faces of the sleepers until he came to a gentleman with his head thrown back exposing the neck well. Slipping a small penknife out of his vestcoat pocket, he deftly felt for the carotid artery, made a rapid stroke to divide it, but being very nearsighted, he missed the mark, but did divide the well laundered collar of the sleeper. Not dismayed he was preparing to make the second trial, when a lady who was watching the proceeding gave the alarm, awakening the victim and the entire car of people. By this time the patient was frantic with rage, and running to the end of the car gathered the apples from the fruit boy's basket, began to pelt the passengers. The conductor appearing on the scene, the passengers demanded his removal, and he was carried to the baggage car. For his own good and the public, this patient should have been under medical care and restraint long before action was taken.

REPORT OF A ONCE COMMON, BUT NOW RARE CONDITION.

In my early practice, alcoholic poisoning was common, and delirium tremens was not infrequently under observation. It is now extremely rare. I doubt if half of the physicians who listen to me to-day have ever seen a case in their own practice.

The case which I now come to report, occurred in the person of a gentleman who was a personal friend of mine. He was a very hard drinker, of the strongest whisky that he could obtain. I was not therefore surprised when called to see him one night to find him suffering from acute alcoholic delirium. The hallucinations, contrary to the rule, were of the most pleasant nature, and for a time caused him to laugh heartily at the imaginary objects presented to his distorted mind. As he described the "frisky kittens" peals of laughter would ring out much to the annoyance of his solicitous friends. After a short while horror was depicted on his countenance, as the aspect of his vision changed, and in making an effort to get away from his tormentors, he had to be placed under strong restraint. He never recovered his mentality, and died a miserable object of suffering. Such a case would cause the hardest hearted to wish "never to see the like again." Had this young man been committed to such an institution as we now have in numbers, he might have been saved to long years of usefulness. In conclusion, I express the hope that none of you will ever be so unfortunate as to have to duplicate the cases reported.

CRIME AS A DISEASE—ITS TREATMENT.*

By JAMES L. CARTER, Whitesville.

The excuse I make for writing a paper on this subject is because of its interest to the medical profession, as I intend to show. Physicians are the most humane of men, and are and ought to be interested in all legislative and judicial reforms. We ought to be psychologists and we ought to understand the action of the human mind, as the governor of the human body.

Being thus equipped, we should understand the real science of government. Charity, knowledge and justice should characterize our actions in all things. I believe physicians, of all men, should understand the philosophy of the mind. When we do this we are very near a great truth, we are most ready to say, in fact we must say, that crime is a disease of the mind, and that the mind governs the body hence a criminal is a diseased individual, and deserves the same humane treatment from the people of the state that the people with small-pox, tuberculosis, typhoid or any other of the many diseases for which the state cares when persons are afflicted with those diseases.

WHAT IS CRIME?

The problem of crime is one of the greatest of the age, it is a case of diseased social pathology, therefore the shortest and best definition I can give for crime, is that it is a violation of criminal law. It would then appear that crime, is or was a legal matter and of no interest to the medical profession, but one for the lawyer; but that appearance is just what I want to get rid of and show that the real cause of crime is a diseased mentality, either of hereditary or acquired nature.

CAUSES OF CRIME.

If I had the time I would place the causes of crime under two great heads, objective and subjective, and then treat them both in their proper order, but that would require time and space, in both of which I am limited.

Under objective causes, are physical and social environment, the ultra righteous would say total depravity, but we must admit that there is a greater underlying cause for all the crime than total depravity. I do not believe all criminals are totally depraved, if so I would advise that we put them all out of the way at once and not try to reform them.

Have we not advanced far enough, intellectually to deny the existence of chance? I believe we have. I believe, back of every

thought, and act, and dream, and fancy is a good and sufficient cause. Is it possible to produce something that is not produced? I believe there is a connection between all events, and that every act is related to every other act, I believe that if this is not true, that it is possible and altogether probable, that the actions of all men are determined by countless causes over which they have no positive control.

We know that men do not prefer unhappiness to joy. Can it be possible that a man does what he does, commits a great crime against the person or property of some one, in order to ever after live a life of misery and shame?

On the contrary it appears that a man wants to better himself and seeks, through mistaken ways, his own well being.

Can it be that the composition of the brain of the criminal is different from that of the honest man. We are sure they have different ambitions, different standards of happiness, different environments. If then there are these differences, and if brain and mind are inseparable, and if the mind controls the body, is it not evident that a man is a criminal because he has no positive control over his diseased mind. Because his vices and virtues are transmitted to him by some direct or remote ancestry. You and I, gentlemen, know that diseases of flesh and blood are transmitted from parent to child, even unto the fourth generation, that children are often heirs of physical deformities. May we successfully deny that diseased minds, let's call them deformed souls, are transmitted, I say we cannot. We know that vices are transmitted as well as virtues, for example let's follow the well-known families of Jukes and Zenos; a close study of these two families shows, conclusively, that crime is a disease and can be transmitted as well as any other disease. Dugdale studied 709 of the Jukes family, and found among them prostitutes, paupers, illegitimates, criminals, petty thieves, and many physical defects. The Zeno family showed the same thing as to the transmission of crime. Five hundred of the Jukes family were benefited by treatment, as will be shown later on. On the other side of the question, the bright side, let's look at the celebrated Edwards family, of which the celebrated Johnathan Edwards was the founder. We find from a study of this family, by Dugdale, as to the transmission of vices and virtues, that more than 1700 of the Edwards family were of the good citizen type: there were great men in this family, in the learned professions, law, medicine, theology, pedagogy, the arts and sciences, among them being Aaron Burr, the great statesman.

*Read before the Daviess County Medical Society.

After a careful study of these and other noted families, by such men as Dugdale, Rathree, Devins, Henderson, Riis, and others, can we, or may we deny, that there was any other cause than total depravity for all this. We admit that in the physical world, there are cause and effect that every effect must have its cause; the causes may be and often, are, obscure, but nevertheless they are there with great efficiency. If this is true in the physical world, may it not be equally true in the realm of the mind? It is not possible? May a man think without something to suggest a thought? Will a man act unless the thought is propelled by one great desire to do that thing? To put that thought into action. John Smith under certain conditions, will act in a certain way, there are certain temptations that effect his mind that, with his experiences will cause him to act in an unstable way; let's call him a Jukes and say that he is in a social environment of crime and pauperism, that these things are his daily companions; do you think he is altogether responsible for his actions of lawlessness? I saw no.

John Jones is of the Edwards type, he is in an atmosphere of social healthfulness; good books, good men, good women and enlightenment. His mind is not acting like the Jukes, on a low plane. An Edwards could not endure, or commit the crime of a Jukes, than could he inherit their physical weakness.

Another cause of crime is our industrial conditions. Economic crisis, strikes, lock-outs, lower wages, increased cost of living, living beyond the income of the head of the family have a profound influence on our criminal statistics, and tend to produce crime. Driven from certain lines of conduct, which are legal, by one or more of the causes named above, they engage in other lines, which are illegal; having failed in one line they are driven to another. Therefore the struggle for existence in our populous districts has its great effect in crime.

The fourth cause I wish to notice is divorce and immorality.

Take a look at the statistics of our reform schools for delinquent children, and see that from 85 to 90 per cent. come from demoralized or disrupted homes. The children of divorced or disrupted homes are apt to drift into crime, and one or both parents are likely to follow the same road.

Let's stop divorce, get our ministers of the protestant church to refuse to marry any one who is a divorced person: prohibit our magistrates and judges from performing the marriage ceremony in any case.

Illegitimate children in most of our charitable institutions are very prone to engage

in crime. Marriage under proper conditions would, or at least, does have a lessening effect on crime, 75 per cent. of our criminals are unmarried men. Another cause of crime is the exploiting of crime and criminals, by our daily papers. Some of our daily papers give, in sickening detail, the last bit of disgusting evidence in a criminal trial, in some cases, making a hero out of the criminal, thus creating in the mind of the young a desire to achieve equal notoriety.

Non-enforcement of our laws, by undesirable officers, defects in our government, bad prison and jail management, political make-up of juries, influence of money and politics in our courts, corrupt police, delays in trials, granting of continuances, reversals in the higher courts, political decision of cases, all have a tendency to increase crime.

Now I want to name one more cause, indirectly, of crime, and then we will notice the treatment.

For what follows I expect to be criticised, but I speak the truth as I see it. The influence of certain social institutions, the lack of proper social amusements of a wholesome kind, where the young may congregate with the old; in the absence of such places, they will resort to the low saloons, dance halls, beer gardens, moving picture shows, cheap theaters, and such places where the appeal, and innuendo is made to the lowest passions of men and women.

The lack of church attendance, by our good citizens, who were formerly in their pews, is now in his ear, or on the river, with his family, thus giving his children a living example of his contempt of the church. What must we expect of the children of this man but non-church goers and skeptics? Where are we to lay the blame for this empty pew? I wish to give my own private opinion, the opinion of a layman, based on what I have heard many men say, and I do not wish to criticise any one for an honest expression of opinion, but the ministers of our protestant churches are, unknowingly, causing the empty pew, and here is why. I have heard you make political speeches in the pulpit; I have heard you excoriate the fellow that was of different political faith from you; I have heard you preach the impossible propaganda of prohibition, and call it a temperance sermon; I think you are preaching too much church-anity, and not enough Christianity.

There are some ministers who are afraid to, or at least do not, denounce the big rich sinner, in the church, like they do the poor fellow. May I ask why? Some of you take an active part in a primary election, and then fail to support the nominee, if he is not your

choice. I think you should either keep out of politics, or take your medicine, like a good fellow. I have heard ministers preach against the use of anti-toxine for diphtheria, and against the use of vaccination for small-pox, because the lower animals were made to suffer in the preparation of these life-saving things, thus making it more difficult for the physician to fight these dangerous diseases. May I ask this question? Which is of the most value to the state and nation, the lives of a few cats and dogs, or those of the little children, of whom our Heavenly Father said "of such is the kingdom of heaven." Thus are the ministers, without intending it, driving from their churches the business man, the cashier, the trustee of funds, the men in whom great confidence has been placed, the well-bred member of his flock; and from this high brow fellow, the broad-minded, liberal, class come the said high-brow criminal. Who is to blame?

This is the twentieth century not the middle ages; men are reading both sides of every important question, they are forming their own conclusions. We must all do this or be left in the hopeless pit of ignorance.

Not long ago, the Mayor of Owensboro gave orders to the police to close up all "Red Light" resorts in the city. One of the inmates, a young girl, was taken in by some good people, who, at her request, were going to help her reform. These good Samaritans were following the example of Jesus of Nazareth, who delighted in helping the fallen, especially if they were attempting to reform. He who set the example of helping the Magdalene of old, who rebuked the Pharisees of old, when they criticised Him for helping the fallen women. Who of the Owensboro Pharisees could have cast the first stone? Why did they trespass on the private property of this Good Samaritan, with the ferocity of a mob, and force this man to drive this girl from his home, and on the street again, thus making it impossible to reform her and thus adding to the criminal list of that town?

TREATMENT.

I shall divide the treatment into two parts, institutional, and surgical. We are using the same methods that were used in the dark ages, confinement, degradation, mutilation; we are not trying to reform, but to degrade. Yes, society must be protected, but how? Are we, as a Christian nation, doing all we can for these poor victims? When we, as medical men, are called to treat a disease, we seek the cause and try to remove the cause as our first step in the treatment. Are we giving this diseased mind the same care we give to the diseased body? We do not blame a man for

having some diseases, we do not blame a man because he is not a painter, a sculptor, an artist, but say his abilities are in other lines.

I am perfectly satisfied that there are millions of people incapable of committing certain crimes; so, too, there may be millions of others incapable of practicing certain virtues. Are we certain it does not require genius to to be good?

Where is the man with intelligence enough to take into consideration the circumstances of each individual case. Who has the mental balance to weigh the forces of heredity, of want, of temptation; can any one, with certainty, analyze the workings of the human brain. Where and what are the sources of virtue and vice? Are they from the same source? In what shadowy resources of the brain are passions born? And what is it that destroys the sense of right and wrong?

Who knows to what extent reason becomes the prisoner of passion, of some strange and wild desire, the seeds of which were sown, it may be thousands of years ago, in the breast of some savage ancestor. I say, who knows? In our penal institutions, is the spirit we exhibit towards our criminals, these victims, the spirit of revenge, of punishment, which increase in these poor fellows the desire to commit crime, or are we lessening the desire for crime, or are we creating in our victims a desire to avenge himself on the state or nation that has tried to cure him and failed.

In our hospitals we do not punish a man because he is sick but try to cure him of his disease. In our penal institutions we punish the sick mind and do not try to cure him, as physicians, in our daily practice would try to find the cause of disease and remove it as far as could be done.

Is it not possible that the harshness of law, the injustice of the nation, produce in the individual a tendency in the same direction? A citizen is then apt to imitate his nation. We regard criminals as enemies of society, society degrades its enemy and in turn its enemy tries to degrade society. Society, by due process of law, deprives the criminal of his life, liberty, or property, or all of them, and thus puts it into the heart of its victim to do the same for the nation. Can we prove the criminal is not a natural product, and that society produces these children of vice. The diseased and insane are victims; can we not take one advanced step and say that the criminal is also a victim. In the sick victim we recognize disease as a natural product; that it is acquired, it may be, by neglect or otherwise, or inherited, but we do not punish, we pity.

If there are diseases of the mind, the brain, and if these diseases of the mind, these deformities of the brain, produce, and neces-

sarily produce, what we call vice, why should we punish the criminal, and pity those who are physically diseased.

Socrates said, "It is strange that you should not be angry when you meet a man with an ill-conditioned body, and yet be vexed when you encounter one with an ill-conditioned soul."

We know that there are deformed bodies, and we are equally certain that there are deformed minds.

Society has the right to protect itself, no matter whether the persons who attack its well-being are responsible or not; no matter whether they are sick in mind, or in body. The right of self-defense exists, not only in the individual, but in society as well. The great question is *how*.

For centuries the world has thoroughly tried degradation, imprisonment, torture and death, and has thus far failed. There is no reformation in degradation. To mutilate a criminal is to say to all the world that he is a criminal, and to render his reformation almost impossible. Whoever is degraded by society, becomes its enemy. The seeds of malice are sown in his heart and to the day of his death he will hate the hand that did it. There is also another side to the question. A punishment that degrades the punished will also degrade the man or government that inflicts the punishment.

Is there any remedy? Can anything be done for the reformation of the criminal? He should be treated with kindness. Every right should be given him, consistent with the safety of society. He should be neither degraded nor robbed. The state should set the highest example and in a noble way. The powerful should never be cruel, and in the breast of the supreme there should be no desire of revenge. A man in a moment of want steals the property of another, and is sent to the penitentiary first, as it is claimed, to deter others; and next to reform him. The circumstances of each case is not studied; no consideration is given to environment, to causes that are not apparent to the most casual observer. All will admit that the industrious must be protected, and that in this world it is necessary to work. Labor is the foundation of all prosperity; larceny is the enemy of industry. Society has the right to, and will, protect itself, the question is, has it the right to punish, has it the right to degrade, or should it try to reform the criminal in a way that is humane and natural. All the penalties, all the punishments, are inflicted under a belief that man can do right under all circumstances—that his conduct is under his control, and that his will is a pilot, that he can, in spite of winds and tides, reach any port de-

sired. All this, I think is a mistake. It is based upon the supernatural and miraculous. We must take into consideration the nature of the man, the facts of mind, the power of temptation, the limitation of intellect, the force of habit, the result of heredity, the power of passion, domination of want, the disease of the brain, the tyranny of appetite, the cruelty of conditions, the result of associations, the effects of poverty and wealth, and of helplessness and power. Until we learn all, or at least some of these things, society has no right to punish, to degrade, to kill. Why not improve the present plan of vocational employment, by making it practical. Why not pay the convict his earnings, and not make financial or political capital out of his misfortune, as is done at present. If the convict is a married man send his wages to his family, that they may not be entirely a charge on the state or community. Erase from him the brand of convict, as far as we can, reform not degrade. If he is a single man give him the sum total of his wages, at the time of his release from prison, that he may begin life with some hope of success, and not a hopeless, nameless outcast, as at present, with our released prisoners.

SURGICAL TREATMENT.

Let the delicate, deft, diagnostic touch of the surgeon's finger find the depression of the skull, if there is one, and with scalpel and trephine, remove the pressure from the benumbed brain, as has often been done, and as was done for the patient from this county by a surgeon of Cincinnati, a few days ago; a hope of cure of epilepsy being given to the friends of the patient. If this depressed skull had been on some other part of the brain, might this man not have been a thief or a murderer instead of an epileptic. What would have been his treatment if he had been either?

Since we as physicians, advocate the prevention of disease, I have this to suggest; we may not be able to stop crime, in a direct way, but we may prevent the criminal. How? Since we believe that crime is, or may be inherited, why not when we have to deal with the habitual criminal, the one that is often before the court for the more serious offenses, have the court surgeon render him sexually sterile by doing a vas-ectomy. This will effectually stop the propagation of criminals by that man; this will not mutilate him nor render him impotent, but will make him sexually sterile.

INTUSSUSCEPTION IN THE ADULT— REPORT OF A CASE.*

By W. L. GAMBILL, Jenkins.

Intussusception in the adult is a relatively rare condition. The majority of cases of this type of obstruction occur in very young children. Holt collected 385 cases under 3 years of age—of these, 28 were under 4 months old; 113 were between 4 and 6 months old; 71 between 7 and 9 months old; 18 between 10 and 12 months old; 32 between 1 and 2 years; 96 cases were collected between 2 and 10 years. Three fourths of all the cases occurred in the first two years of life, and one-half between the fourth and ninth month. The explanation of the great frequency of occurrence in infants as compared with adults, we think, is due to differences in the anatomical relations of the parts, greater irritation to which the intestines are subjected, the greater intensity of reflex action in the infant, and hence more violent peristalsis and muscular spasm. It is claimed by Power that the mesentery is proportionately longer in the infant allowing greater range of motion, and he also suggests that the ileo-cecal valve may be less competent at this age. The invagination is caused by irregular peristalsis. One part of the tube, by reason of irritation, becomes stiff and small by contraction of the circular muscular fibres, while the part immediately below is relaxed, and into this the smaller and stiffened part telescopes or is propelled by the force of a downward peristalsis.

Lorenz suggests the role that may be played by collateral morbid anatomic changes; as, for example, by the presence of an enlarged lymphatic gland or Meckel's diverticulum, as well as tumors, chiefly non-malignant in character, dysentery and tubercular ulcers of the bowel and mucous colitis. The vermiform appendix has also been noted to act like a Meckel's diverticulum in the production of this condition. The mortality of intussusception after operation has been studied by Wichmann. Of 724 cases, 223 were operated upon; 73 recoveries and 150 died.

REPORT OF CASE

S. C., male, colored, age 24. Family history negative; machine runner in mine. No evidence of syphilis or tuberculosis. No history of injury or serious illness; strong, muscular. Present illness began on the night of January 2, at 10 p. m., while patient was returning home from another mining camp some five miles distant. While walking along, was seized with severe pain in abdomen in umbilical region, colicky in nature, but never en-

tirely absent, the pain followed in about one hour from its onset by vomiting. Was carried by friends to a nearby boarding house. Physician saw him first about 4 a. m., at which time he was still suffering violent pain, temperature 97 degrees, pulse 68. Tumor palpable in right iliac fossa. Patient given hypodermic of morphine, grain 1-2 and atropine grain 1-75, wrapped in blankets and sent to Jenkins Hospital, arriving at 1 p. m., January 3rd. Temperature upon admittance 98.3, pulse 68, vomiting had ceased, but had singultus; abdomen not distended; mass as large as adult fist in right iliac region; vomiting resumed at 6 p. m. Lavage employed and copious saline enemas used with passage of a few scybalous masses. On the morning of January 4th, 4 a. m., temperature 97 degrees, pulse 112, thin dark stool at 5, and another at 5:30 a. m. Vomiting still present, abdomen moderately distended. Operation advised and refused. Vomiting continued throughout the day, becoming fecal at 6 p. m., at which time abdomen was markedly distended, pulse 124, temperature 101. Mind clear. Operation again advised and accepted. Taken to operating room at 10 p. m. Ether anesthesia, abdomen opened in median line, peritoneal cavity contained quite a quantity of bloody serum. Intestinal coils enormously distended. Mass found to be an ileo-cecal intussusception, the apex of which reached well up into the ascending colon; constricting ring drawn so tightly that all efforts to extricate telescoped ileum were futile. Constricting ring in colon divided on anterior surface by 1-in incision and 18 inches of gangrenous bowel withdrawn. Intestinal resection performed in usual manner, using Murphy button, reinforced by Lembert suture after closing the incision in the colon. During the operation the patient had to be placed in the Trendelenburg position to get distended intestines out of the field, during which time there was a flow of dark brown fluid from nostrils and mouth with a distinct fecal odor. Horizontal position resumed to thwart suffocation, and abdomen closed hurriedly with silkworm gut en mass. Drainage tube introduced at the lower angle of wound, an intravenous saline being administered by an assistant while abdomen was being closed. Patient put to bed in Fowler position; Murphy treatment expelled, bowels moved at 4 a. m., with the passage of a large quantity of gas, tympany subsided and abdominal condition was good, but patient developed pneumonia of entire right lung, followed by an abscess, with extremely offensive odor, pulse ran up to 140, respiration 54. Pulse continued above 100 until February 8th. Button pass-

*Read before the Letcher County Medical Society.

ed on 13th day after operation, primary union obtained. Patient was discharged March 1st, well.

SUMMARY.

The points to which we desire to call attention are, (1) The infrequency of occurrence in the adult; (2) The length of time between the onset and the operation; (3) Failure to find definite cause for the invagination; (4) The pneumonia was due to the aspiration of particles of the fecal vomitus.

THE REPORT OF THE LOUISVILLE VICE COMMISSION.*

By THOMAS H. MULVY, Louisville.

The report of the Louisville Vice Commission makes no effort to discover causes. Therefore, it is unable to recommend adequate treatment. Medical science alone knows the cause of the vice evil and is able to apply the remedy.

These two postulates or assumptions, if you prefer, we shall endeavor to demonstrate. For the benefit of any who may consider this a social subject, we will, in as far as possible, avoid technical terms, and give detail that otherwise would be unnecessary.

The Louisville report, with the exception of the recent Massachusetts State Vice Commission report, is not unlike reports of like nature that have been made in other communities between here and Boston. It embodies the statements of the men in these communities who are endeavoring to eliminate vice according to the rules and recommendations laid down by your Commission, viz: Mayor Baker, Cleveland; Major Pullman, Superintendent of Public Safety, Washington, D. C.; Major Edgerton, Commissioner of Police, Rochester, N. Y.; Commissioner of Public Safety, Mason, of Philadelphia; Commissioner Niles, of Baltimore, Md.; Dr. Walker, Baltimore, Chairman of Maryland State Vice Commission; Police Commissioner O'Mara, Boston.

All of these statements and reports in their essential features embody the same fundamental errors, and all seem models of the same defective pattern. Therefore, what may be said of the Louisville report is true also of the others. All are obsolete and antiquated, superficial, inefficient and incomplete.

The failure of the efforts of these intellectual communities and intelligent men to develop any new thought as regards the cause, and the remedy of this trouble dissipates the idea that the vice evil ever can be understood or corrected by any agency other than that of medical science. Interwoven with the his-

tory of civilization is the history of the failure of the uplifter in his crusades against vice. The prophets and Solomon despaired of eliminating it, and your Commission has been compelled to write at the end of the chapter these words: "Vice closely in harmony with the prevailing public opinion, will continue until time has ceased to be."

These facts of themselves should cause you to revert to the beginning of this thesis, and ponder without prejudice our two postulates.

We would like to review the report, but to do so would encroach upon the main object of this paper. We urge all to read it, as it contains much valuable data. The Commission is to be commended for the thoroughness of the local survey.

We are not quarreling with the Commission or its report, but as medical men we are applying the same yard stick that we do not hesitate to apply to our own investigations in the field of medicine and surgery. Medical science, in a given disease, is not interested in an accumulation of accidents. What we want to know is the cause and treatment. For instance, in the epilepsies we have a great accumulation of clinical data, the accidents in the case, but we do not know the cause or the treatment; therefore, it is with the greatest trepidation that we approach a discussion of the subject, or advance theories as to cause and treatment that will not withstand the application of this yardstick. We know that the plague for thousands of years co-existed with the social evil, like it defying all effort at cure and control, devastating entire communities and even nations, has succumbed to our investigations and the scientific application of this yardstick. We know that remedies not founded upon sound etiological principles not only fail to cure, but often do great harm. Is it not reasonable then that in view of the ancient and unsatisfactory history of the vice evil, that we as citizens with the best interests of our city at heart, be allowed to apply our yardstick to this subject?

To the medical mind the most striking feature of this report is, that it makes absolutely no effort to discover the cause of the trouble it is endeavoring to remedy. It gathers a vast accumulation of the accidents, but entirely ignores the essence of the case. It continually begs the question, and reasons from false assumptions. It has no premises, at best fallacious ones, therefore is bound to arrive at conclusions inadequate and paradoxical. Hence, we find the report and the gentlemen quoted declaring that in a given time vice must be eliminated and at the same time reiterating that it cannot be eliminated. From a careful perusal of the report, we are led to

*Read before the Jefferson County Medical Society.

believe that a veneer of the evil is the best that can be recommended. Thus to quote verbatim from the report (page 33) Superintendent of Police, Major Pullman, Washington, D. C., in regard to disorderly people moving into premises near residences of prominent citizens, is alleged to state—"that this never worried him, but rather furnished a source of gratification," "as the prominent and influential citizen," etc. * * * * "while the poor and less influential citizen would have more trouble and be longer in getting them removed." (P. 37 Report) Police Commissioner Niles, Baltimore, is alleged to say that "great care must be taken or the evil becomes a disease that breaks out all over the body politic," etc. Dr. Walker (Report, p. 38) is alleged to say that "these people have moved into the cheap boarding-houses, have secured employment in cigar stores, as waitresses, etc., but are still plying their trade."

All make a distinction between commercialized vice and just plain, ordinary, vicious, ugly every-day vice. Medical science recognizes no such distinction. To her pus is pus wherever found, and the more masked the more dangerous. And so it is with vice, all the way from Douglas Boulevard to the Canal, and from the Big Sandy to Back Bay. The Commission evidently realized its awkward and paradoxical position and, as if it had grabbed a hot potato, dumps it upon the shoulders of the Police, with the admonition to wipe out the evil in two years. Here the matter rests in great danger of becoming as in many cities, which God forbid, the battlefield of partisan politics. The Commission wisely recommends the avoidance of the sensational and the spectacular in carrying out its recommendations; but who, in the heat of a municipal campaign, is going to prevent the designing politicians from declaring that an efficient administrator has not been radical enough? Who is going to prevent "that arousing of public indignation," and the demand for a hunt and a witch-burning? Louisville is too much in the habit of accepting without question everything that comes out of the East. The sooner she learns to originate her own thought, develop her own ideas and work out her own commercial problems, the sooner will she achieve her proper place in the galaxy of great cities.

Had the Commission, instead of confusing itself with these pallid documents, asked counsel of the Jefferson County Medical Society or the Kentucky State Medical Association, it would have produced a document bristling with the originality and ruggedness of Western ideas founded in the bed-rock concrete principles of medical science, and achieved for itself priority and distinction as investigators and writers in the Vice Commission

business. As it happened, while it was writing a very beautiful play with the Prince entirely left out, another Western city, with the aid of its physicians was reviewing the same effete models—only to reject them. It then attacked the subject in characteristic western manner and evolved that original and revolutionary system of which Judge Merritt M. Pinckney and Doctor William Healy, respectively Judge of the Chicago Juvenile Court and Director of its Psychopathic Institute, are the central figures.

To quote their premises: "Medico-Psychological work in courts is founded on the common sense necessity for accurate diagnosis and prognosis preceding rational treatment. Now the prescribing of treatment, social treatment, is just exactly the business of Courts which deal with offenders." Judge Frater, of Seattle, who came to observe and study, says: "I see the point. I am a therapist. Yet I have been working in a blind way without diagnosis." He went back to Seattle, established in his Court a definite department of diagnosis, and appointed a physician his Chief Probation Officer.

Miss Miner and Miss Katherine Davis, after all of their years of experience with the New York social evil, have come to this conclusion: "That therapeutic measures cannot be introduced, without adequate psychology." We, therefore, mention these few points, in order to contrast the report with other methods, which, however imperfect they may be in the beginning, give great promise of ultimate effectiveness.

Our paper will not discuss the many aspects of the vice evil, but will endeavor to place before you a brief review of the accepted clinical data underlying the social evil. Be it understood that social evils other than the vice evil are super-imposed upon such a pathological ground-work. Our review covers the work of European and American clinicians, and dates from the observations of Pritchard, 1835, to the present splendid work being done by Goddard, Healy and others.

We will avoid statistics, as to enter such a discussion would lead us too far afield: suffice to say that there is a wide variation in percentages, varying as to countries, location, types and as to whether or not the type is highly selected, medium or otherwise. Some produce figures to show that 89 per cent of the units in the vice evil are abnormal, others again place the figures too low. All, however, agree that the nucleus, if not the great bulk of community vice, is founded in abnormal psychopathological or physiopathological social units.

If then the social evil in toto or in part is founded in or recruited from morbid, physio

or psychopathological units adequate treatment must be founded in rational diagnosis and prognosis. We contend that it is so founded. Therefore, the treatment must be founded in rational diagnostic and prognostic principles. This is essentially the province of medical science.

In addition to physical causes, such as the deteriorations from alcohol, drugs, infections, intoxications, reflex, surgical and endocrine conditions, the epilepsies and other psychoses, medical science finds two great groups of clinical pathology from which the units of the vice evil are recruited.

These are (I) the congenital defective mental development. Defendorf and Krapaelin think the pathological anatomy of this group is that of organic brain disease. "The incomplete development of the cortex due to prenatal disease processes of the undeveloped brain which produce a partial destruction of the issue, thereby rendering the complete mental development impossible." (II) the second great group is founded in a morbid constitutional basis, or the so-called insanities or imperfections of degeneracy. This group constitutes (a) the constitutional psychopathic states; and (b) psychopathic personalities. Of these Defendorf and Krapaelin regard the former as "more circumscribed, developing gradually and appearing only at times, while the psychopathic personalities include the "characteristic morbid developmental form of the entire psychic personality which are justly regarded as an expression of degeneracy."

These divisions in some instances may be inadequate and the border lines hard to determine, yet they should be strictly adhered to. A great deal of confusion is arising here in America because writers, especially penologists and psychologists either do not grasp these fundamental classifications or are endeavoring to establish empirical classifications of their own. The result of this is bound to be misleading and to cause great inaccuracies in the application of research methods. Already we are beginning to see the results of this confusion in the percentage of some investigators, due no doubt to their improper application of the Binet system. Until a more satisfactory classification can be evolved we must one and all, in behalf of method and order, adhere to the classification of the Master at Muenchen.

Of the congenital defective states, we will consider the Moron; of the psychopaths, the unstable. Want of time prevents us at present from entering a further classification, analysis and differentiation of the above, which would be not only interesting but essential, if the lay person, Judge and psycholo-

gist, would understand the relation of society to the vice evil.

Briefly the Moron, sometimes called the feeble-minded, is unable to achieve mental development beyond the age of about 12 years. His defect is one of *quantity*, although the quality may be very good. He is unable to elaborate his experiences. His stimulus to action is from without. The defect in the psychopath, on the contrary, is one of *quality*. He is capable of good intellectual development, in fact often possesses brilliant intellectual qualities. His defect consists in a morbid elaboration of the phantasms of his imagination, which are of more importance to him than the incidents and events of actual fact. Both types are usually physically normal and often of comely proportions, although most of them on close examination may reveal some of what Tredgold preferably calls "anomalies of anatomical development and physiological function." They are oriented and ordinarily pass as perfectly normal people. Most of them possess a smattering of superficial knowledge which conceals their real dearth of ideas. In fact, they are often looked upon as being very witty and bright individuals. Diagnosis is by actual test and competent study of the life history. It is self-evident then that the psychopath will not be detected by the Binet system, yet, we fear, many are overlooking this fact and passing many as intellectually normal who are abnormal in other fields of the psychic sphere.

The definition of the Moron was formulated by the Royal College of Physicians of London, and was adopted by the British Royal Commission for the Study of the Feeble-Minded. It is as follows:

"One who is capable of earning a living under favorable circumstances but is incapable, from mental defect existing from birth or from an early age (a) of competing on equal terms with his normal fellows, or (b) of managing himself and his affairs with ordinary prudence."

You may smile and say that this definition applies to all of us, but if you will follow it to the final analysis you will meet with a great mental jolt and find yourself face to face with a most serious and far-reaching social problem, viz.: that in 1912 there were in the United States more than 500,000 defectives saprofiting upon normal society, (Goodard); (2) that heredity in this class is asserting itself with deadly sureness; and (3) that this type is increasing at twice the rate of the general population. (Tredgold and British Royal Commission.)

Here is as good a place as any to note a few samples. The Jute family in New York numbers 976 persons, of whom only 161 can be de-

terminated as normal (Goddard). Nam family (No. IV. 76 Illinois), dull-witted pauper, married twice; first wife, same type; 6 children; No. 1 died early, No. 2 criminal and pauper, also the father of five children following in the footsteps of father, and grandfather. No. 3 feeble-minded epileptic, 4 and 5 public women, 6 adopted by good family, but unable to be controlled, worthless, quarrelsome and dull. By second wife 5 children, Nos. 1 and 2 just self-supporting, lowest kind of labor, 3 and 4 feeble-minded, 5 epileptic. Three years ago \$6,300 of the public's money had been spent to care for and restrain this second family which was better behaved and smaller than the first. It is estimated that Nam to date has cost his community over \$20,000. Another sample from the Ohio Juvenile Research Bureau of 261 members of the family traced 77 are grossly immoral; 74 criminals of petty character; 55 feeble-minded. Goddard traced over 200 families 65 per cent showing this hereditary character and extending into the fifth generation.

Now let us look at the statistics. We have seen that there are in this country over 500,000 defectives, costing the country from two to four million dollars a day (Healey); that they are increasing at twice the rate of the general population and reproducing their kind with deadly sureness. The United States Army Officials find one or two defectives in every increment of recruits coming to a regiment (King). They find that they cannot make soldiers out of Morons because they cannot learn; that they cannot tolerate psychopaths because of their bad example, disorganizing effect, instability and insubordination. It is a constant source of unnecessary expense to get rid of them. The British Royal Commission for the Study of Feeble-Minded, their work extending over a period of four years, found in England one feeble-minded person in every 217 of the population, Ireland one in every 175, Scotland one in every 317. An average county in the state of Michigan found one feeble-minded person in every 187 (Goddard).

Goddard, in an entire school system of 1000 children found two per cent. of them feeble-minded. Dr. Thurman, of Leland-Stanford University, by actual test in a small school system of 800 children, found 25 feeble-minded. This would be a little over three per cent. Johnson quotes the results of the first five grades in an entire school system of 2000 school children, 3 per cent were found feeble-minded and 15 per cent. backward. On the 2 per cent. basis New York City is estimated to have 15,000 feeble-minded children in its public schools. These children are the future recruits of the Juvenile courts and the vice evil. On the 2 per cent. basis, how many

future recruits to the juvenile courts and the vice evil should we find in the Louisville schools, and how does the number compare with what the Commission found as to the number of individuals now actually engaged in the vice business in Louisville?

Actual tests in our reformatories show that at least 25 per cent. of the inmates are distinctly feeble-minded. Of 100 consecutive admissions at the State Reform School for Boys at Rahway, N. J., 25 were feeble-minded and nearly as many more were border-line cases. In the State Home for Girls at Trenton a similar condition was found (Goddard). Goddard examined 56 girls who had been inmates of the Massachusetts Reformatory but who had been released on probation. The average age was 18 to 20 years. Of the 56, 52 were found distinctly feeble-minded. Of 100 youths in the Detention Home of the Newark Juvenile Court, by actual test, one was found who had average normal mentality (Goddard). The following, by Goddard, in the *Journal of American Institute of Criminal Law and Criminology*, Vol. 3, No. 3, 1912:

"In one group of 100 cases passing through the Newark Juvenile Court, selected at random, the ninety-seventh was normal, and the only one in the whole group. By actual test, 66 per cent. of the children passing through Newark's Juvenile Court are feeble-minded. He says that "one's attention cannot but be arrested by the fact that the number of feeble-minded children in Manhattan and Bronx is 80 per cent. of the number of children passing through those Courts in one year." (approximately 10,000 children pass through these courts in a year.)"

Dr. E. R. Spalding, resident physician of the Reformatory for Women in Farmington, Mass., in a group of 500 women, who had been arrested, finds as follows: Alcoholism alone 25 per cent.; vagrancy, night-walking, lewdness, 58 per cent.; offenses against property, larceny, forgery, 15 per cent. Many of these also belong to the first two classes. The remaining were offenses against the person, as abandonment of children, assault, manslaughter, etc., 5 per cent.

As a final, let us quote Dr. William Healy, Director of the Chicago Psychopathic Institute, who is conducting the most conservative and careful study of delinquents because of the system which gives him the opportunity for a great deal of re-examining and follow up work. These are summaries of his Institute work from a paper which he read before the recent Pan-American Scientific Congress, which has not as yet been published. It is a comparison of two series of young repeated offenders, each one of 1000 cases, the average age is 16 years. In the first series he says: "We found about 67 1-2 per cent clearly

normal and 75 per cent in the second series. Of the remainder in the first series about 10 per cent were certainly feeble-minded; in the second series about 11 1-2 per cent. Of the other abnormal mental cases there were psychoses, and those which are dull from physical causes." He further says, "Figures from Reformatories and Prisons are sometimes well founded, and sometimes I am afraid made upon inaccurate surveys." The statistics from Bradford and Sherborn, he says, are good. In these women's prisons there are said to be about 30 per cent. feeble-minded." Recently, says he, I have figures from Waverly House, New York, for sex offenders, as seen from the courts. About the same percentages (30 per cent.) prevail there. These, he says, are well worked-up statistics, but you must remember that even here you are dealing with a highly selected group, namely, those who have failed to the extent that they are caught in the clutches of the law. "The successful vice unit," says he, "is naturally the bright one, and is not studied by any psychologists."

The Massachusetts State Vice Commission's recent figures indicate that 50 per cent of the vice evil is feeble-minded. Healy thinks that as doctors we should bear in mind mental deterioration which may result from alcohol, drugs, etc. In some of his previous court work Healy reports 7 1-2 per cent. epileptics, and I believe about 7 per cent. other psychoses, as being found among the vice units.

To the above elements entering into the make-up of the vice evil, not including the very small per cent. due to the results of child labor, improper surroundings and deficient wage which the commission very diplomatically forgot to mention, we must add the physio-pathological elements caused by the ravages of alcohol, drugs, uncorrected reflex irritations, infections, intoxications, endocrine disturbances, etc., and the element contributed by the psychopathic states and personalities, which it seems must be determined by the psychiatrist. The difficulty with this element, however, is as stated above, they are frequently clever enough to escape the clutches of the law.

It seems then that if vice conditions in Louisville, are as they prove to be elsewhere, that the first step in the way of treatment or correction is the establishment in each individual case of a correct medical diagnosis. This aid the medical profession of the city of Louisville is willing and ready to contribute.

TREATMENT.

When we begin to talk treatment, we talk in taxes and right here is where the average good citizen loses all interest in this subject.

We are now upon unpopular ground and will be brief.

As to the treatment we accept the many excellent recommendations of the Commission with this reservation: that the eradication of the vice problem is not primarily a matter for the police. They are but one of the adjuncts in the prescription.

We have observed that the recruits of the vice evil are seen first in the home, then in the school. Later we see many of them in the juvenile courts. These, as a rule, are the dull and very vicious. The balance, the high-grade Moron, and the psychopath we find insubordinate in the home, "they could if they only would be" type in the schools, the unsteady in their occupations, those unable to adjust themselves to their surroundings—drifting. These are clever and manage to avoid the law as now applied. These become the backbone of the vice system and are the real obstacles in the way of a complete eradication of the evil. Even these, however, can be reached.

To apply proper treatment, our courts, to some extent, must be re-arranged. All cases known or suspected to be units of the vice system, whether juvenile or adult, should come before the same Judge. He should be assured of a long tenure of office, because his value to a community will grow with his experience in this line. He should be especially instructed in his line, and adapted by nature for the work. The court prescribes the treatment in each case coming before it, after the proper diagnosis and prognosis has been made by competent medical authority. The execution of the treatment is carried out under his supervision in a follow-up system co-operated in by the physicians, the family, the adjuncts of the court, and the various civic and juvenile court associations.

It is a pitiable thing to see a court condemn to the influence of base surroundings a child already prone by nature to the baser things of life. It is almost an act of the feeble-minded itself for courts to recommit time after time the same case. Chief Justice Rhodes, of England, says, that out of 180,000 cases tried in one year, over 10,000 had been convicted upwards of twenty times before.

Krapaelin reports the case of a person of considerable means who in a short time was indicted and tried in the Criminal Courts 83 times, and was convicted on the indictments 62 times. 122 criminal indictments in the same time were lodged by this person against others. Another example, a young woman spent 21 out of 25 years in jail as the results of comparatively short sentences. This same party had caused in that time upwards of 30 fires.

The Judge then should be empowered to

establish as part of his court a psychopathic institute in charge of a competent medical director. All of these cases coming before the court should be submitted to the institute for proper examination and differentiation. If physical or reflex troubles are found or suspected, the case should be referred to competent specialists for examination and treatment. The vice hardened, unafflicted individual, who has been, as it were, a partner in and encouraged by the old regime, must be tabulated, provided for, assisted and kindly but firmly dealt with. It will not do to ruthlessly drive these cases out of their natural habitat without making provision for their existence, and following up to see that comfortable existence is assured, otherwise they will burrow, hide and hunt, stealthily, like the wolf.

Vice is facultative. As an organized entity it is not vicious. It is but the outcropping of a natural law, the first law of nature, namely, that of self-preservation. We have seen that many of these people are defective. They are unable to cope with their normal fellows in the highly organized state of society. Employers will not keep them because they are too dull or too capricious. Relatives do not understand them and drive them out. Society has no time or use for the misfits, thus they are jostled and knocked from pillar to post and always, like the little potatoes in a cart reaching a lower level. They become morose and hardened against society, and easy subjects for temptation. Addicted by nature to abnormal appetites, these unseaworthy crafts are finally completely shipwrecked in the alcoholic shoals. Where there are no lower levels they all congregate and set up a little world of their own, where, with the consent of society they eke out miserable existence. Vice must eat and be clothed in winter, and if society through ignorance denies them bread and meat, instinct will find a way. Some, the lethargic, will sit and starve until society puts them in the alms house; others, the more active, will take matters into their own hands and steal; others again will adopt the easiest way. These individuals are the wards of the community, not subject to pity or execration, but to justice. How are they going to get it? As we have outlined.

The recruits of the vice evil are now in the homes and in the schools. When you have stopped the recruiting of the vice evil the superstructure will fall as a house of cards. Intercept the essence, and there can be no accidents. To do this your institute must reach out into the homes and the schools. The first symptoms must be recognized. Parents must be confidentially instructed and advised. Every precaution must be thrown around the subject. Proper recreation and companions must be provided and most important, the

capabilities and capacity for work must be ascertained and the employment selected. The employer must be part of the system. He must be made to understand the character, peculiarities and limitations of the employed. You must expect him to pay wages according to the return he is getting for his money. If a minimum wage scale ever becomes a law in this state, some way must be devised to except these cases, otherwise an employer would not be bothered with them and they would then be wholly unsupporting and an added burden to the community.

An industrial home under the supervision of the institute must be one of the remedies at the disposal of the court. This, not in the nature of a jail, but what the word properly signifies, a home. Properly apportioned hours of work, recreation and amusements, must be provided under the direction of trained, kindly, understanding people. Here the cases coming through the courts must be differentiated, classified and grouped. Here their capacity for work, tastes and skill in certain employments, must be ascertained. This done they should be trained in some practical, not too arduous, or exacting trade or occupation. In time, the charge may be probationed to the home and to the employer, subject to a proper follow-up system. In this way, the patient can be made to appreciate a sense of responsibility to himself and to the community. In this way, the community can in honor to itself, and in justice to its misfits, erect about them a constructive, kindly understanding, protecting influence. Most defectives are tractable and fairly industrious, under the proper influences, and most of them go wrong through ignorance, bad company and misunderstandings.

This, then, is a brief outline of the three phases of the question under consideration, viz.: the report, some data and a tentative constructive program. How the committee could have overlooked so many patent features of the question is a mystery. The chapter on "All Year Play Grounds" is good and the project should be pushed. But the assumption in this chapter that all children are susceptible to the same influences is erroneous. A small per cent. of misfits in a group of normal children at a certain age will disorganize and exert a bad influence upon the whole group, just as one bad apple in a barrel will affect all the good ones. This is an age of specialization. You could not expect a group of doctors to carry a complicated case at law successfully through the courts or, successfully settle a question in dogmatic theology. Neither could you expect a body of laymen to work out the cause and control of yellow fever and the same holds good in any other line.

The philosophy of the report is fatalistic. It is the philosophy of commercialism. It asserts that gain is the cause and the main-spring of vice. It is a sordid philosophy that runs counter to the ideals that have marked the progress and achievements of the Aryan peoples. According to it there is only a question of price between all the beautiful characters we know and have read about and the degradations of the brothel. It reiterates that old fallacy that caused the eclipse of one of England's greatest writers, viz.: that "we are the victims of circumstances," the "slaves of our environment." In essence it denies the existence of free will which is, as far as we are concerned, only the exercise of the normal functions of the basically sound attributes of the mind. It is in conflict with the most sublime chapter that will ever beautify the vellum pages of American history, viz.: The Womanhood of the Confederacy and the Reconstruction Period.

TWILIGHT SLEEP.*

By JOHN E. WILSON, Butler.

Twilight sleep refers to a type of anaesthesia. It is a figure of speech, a simile. It means as a time from the disappearance of the sun until complete darkness, there is a space of time, a transition period halfway between darkness and light, a mellowing of each, and a mingling of both. So, also, it is claimed there are drugs that will produce a degree of anaesthesia that will retain a kind of semi-consciousness and yet eliminate the sense of pain. The chief of these drugs are scopolamine, and hyoscine, two powerful alkaloids.

It is not the purpose of this paper to compare the various preparations of hyoscyamus, and belladonna. One firm has for many years put out a tablet composed of hyoscine hydrobromine gr. 1-100, morphine hydrobromine gr. 1-4, and cactin gr. 1-67; dose, one tablet by needle. "Hyoscine gr. 1-200 to 1-50 is a cerebral and spinal sedative and hypnotic, directly depressing the higher functions of the brain, and affecting the heart but feebly. After the administration of a full dose, gr. 1-100 to 1-50, there is in most subjects a period of semi-maniacal delirium, with flushed face and dry mouth, lasting from one to two hours, and followed by the sedative action of the drug, during which the pulse rate and frequency of respiration, at first quickened, are distinctly lowered. It especially affects the motor tract of the spinal cord, and the cerebral cortex, slightly depressing the heart, but greatly slows or paralyzes respiration."

Those most familiar with the use of the drug, admit that respiration drops to 6 or 10

times per minute, following the use of a single dose. Just what modifying effect the morphine has added to this preparation I shall not attempt to settle. That it in no way diminishes the potency of hyoscine, is very evident. It is very probable that the effect is intensified. In the past ten years the writer has used four or five hundred of these tablets, and wishes to emphatically state that it is a very powerful and very subtle preparation.

There is evidence to show that a tablet containing 1-4 grain of morphine in this combination is as potent and equally difficult to handle as six times that amount of morphine alone.

A noted surgeon, of St. Louis, claims that after two doses of an interval of three or four hours, he can amputate a leg as well as with chloroform or ether. These are grave and serious statements, that they are comparatively true, there is no doubt in my mind. My use of the drug has been confined almost entirely to obstetric cases. However, in one case of gastric carcinoma, one h.m.c. tablet would control the case and give more relief than 6 or 8 1-4 grain tablets of morphine alone.

Evidence is not wanting in the medical profession to the effect that the drugs used in the beautiful "twilight sleep," are old, well known and very powerful.

From what has been said, it must be very evident to all, how these drugs should be handled, and by whom.

Educated men outside of the medical profession are always on the alert for so-called scientific articles for their respective journals. Hence, this pathetic phase of the physician's work has been seized for popular instruction under the romantic and beautiful title "Twilight Sleep."

In all times, and in every walk of life, there is waiting the exploiter, who has not the talent to create, but does have the wit to appropriate unto himself all the honor of new inventions and applications.

Hence, some special institutions and lying-in headquarters have sprung up and are being widely advertised, where, alone it is claimed, the full scientific benefits may be had at a price within the reach, at least, of the very wealthy. We read of it in some of the largest magazines, in language that would soothe a case of mania-a-potu to sweet and pleasant dreams. That any careful physician is competent to try, and test, and use this preparation is not to be disputed. This is a part of our business. The dose originally spoken of is too large for safe obstetrical work. The effects are too profound, and will bring anxiety as a result. One half strength tablet is enough to use at any one dose in obstetric practice.

*Read before the Pendleton County Medical Society.

It is like any other drug—surely not indicated in all cases. However, in a nervous, excitable high-tension woman, there is probably nothing else that will so mutually blend the happiness of patient, friends and physician.

NEWS ITEMS AND COMMENTS

Various medical organizations including the American Medical Association and the American College of Surgeons have recently cooperated in organizing a committee of civilian physicians and surgeons on medical preparedness. Dr. William J. Mayo was elected chairman and Dr. Frank F. Simpson, of Pittsburg, secretary. Kentucky was represented on the committee by its most distinguished surgeon, Dr. Lewis S. McMurtry. The Committee presented its general plan, offering to assist the Government in time of peace as well as in time of war in so organizing the medical profession as to supplying the need both of greater medical supplies and more efficient organizations of medical forces which the European war has demonstrated to be necessary. This offer met with the cordial appreciation of the President and he wrote the committee that the Secretaries of War and the Navy had directed the preparation of a plan for availing the Federal Government of this generous and patriotic offer. General Gorgas will be in charge of the preparation of the plan as representative of the army, which insures its success. The advisory committee for Kentucky appointed by the general committee consists of Drs. J. G. Sherrill, of Louisville, David Barrow, of Lexington, Frank Boyd, of Paducah, John D. Jackson, of Danville, J. B. Mason, of London, and A. T. McCormack, of Bowling Green. The committee will be glad to have suggestions from any member of the profession of Kentucky.

Dr. John D. Maguire, city health officer of Lexington, felt very much gratified when he received from Dr. Arthur McCormack, secretary of the State Board of Health, a request for one hundred copies of Lexington's health and food and dairy inspection codes, for distribution to other cities and towns in Kentucky. Secretary McCormack expressed the opinion that Lexington has model regulations regarding these important features of civic hygiene and is anxious for other cities and towns of the State to copy and emulate the admirable provisions which have been formulated by Lexington's health board. Requests have also come from Augusta, Ga., and other Southern cities recently for copies of these codes, showing that Lexington is decidedly in the limelight when it comes to sanitary regulations.

Health Officer Maguire is having a pamphlet printed containing the health code, the food and sanitary inspection codes and other data, which will soon be ready for distribution, when those

cities which have requested copies for the betterment of health conditions, will be favored.

The prevalence of infantile paralysis in New York has caused minute research into the history, nature and source of the disease, and some facts both important and interesting have been discovered.

It is not a new disease, but, in so far as records are available, it has been appearing in epidemic form in late years more than in former periods.

Accurate descriptions of the symptoms of the disease occurring in children are found in the writings of physicians in the first year of the last century; one as early as 1784. But it was first scientifically diagnosed, classified and defined by Dr. Jacob Von Hieine, a German physician, in 1840. In his time it was regarded as rare; but there is much discussion of the disease found in medical works from Von Hieine's time until now.

It is clearly established that the disease is communicable, and it is believed to be both contagious and infectious.

There seems to be no doubt that it is produced by a germ. A recent report was circulated that in the Rockefeller Institute, New York City, there has been "the cultivation of a micro-organism regarded as the causative agent of the disease. Unless that report is true, the germ has baffled discovery, or, at least, has not been distinctly isolated. There appears to be satisfactory and abundant indications of its existence. One of these is the easy communication of the disease to monkeys. The animals were infected by injecting the virus into the veins, feeding it into the stomach, or rubbing it into the nose.

The disease may and has been known to occur at all periods of life; but prevails mostly among young children between the ages of one and four years. It appears in a number of unusual grades of severity.

There is said to be strong evidence that some cases of the disease show only premonitory symptoms, possibly nothing more than sore throat and slight fever. In fact, there is a theory held by some that the comparative immunity of adults from the disease comes of the fact that most people have it in slight form when young; but this is probably a fanciful exaggeration. It is said, further, that the disease in severe form may be contracted from these slight cases, and that they should be subjected to all the rules of isolation and disinfection applied to the most acute forms.

It is believed that the disease, like the familiar influenza, or grip, is apt to prevail at all times in a sporadic way, with local epidemics occurring under most favorable conditions.

Because of the well established fact that the disease is from a communicable germ, special care is urged in disinfection.

It is believed that the disease is possibly transmitted through the air in dust, and frequent

street sprinkling is recommended in communities where it prevails.

It may also, it is said, be carried by the pestiferous house fly, or perhaps other insects, and, therefore, the careful screening of houses is recommended. Also screen over the beds of children when asleep.

The use of disinfectants for the throat and nose is recommended.

Scientific students of the disease do not consider that the prevalence of the disease in New York in epidemic form a certain indication of its spread over the entire country. There was an epidemic of the disease in New York in 1907, when 2,500 cases were reported there. Quite a virulent epidemic prevailed in Iowa in 1910. In fact, there are a number of instances recorded of local epidemics of the disease, and none where it spread over large areas on a distant line of travel, like yellow fever and cholera, though its clearly infectious nature makes that phase possible.

The Medical Corps has been considerably upset by the rejection of Maj. J. K. W. Piper, of Russellville, who was second in command to Maj. Charles W. Hibbitt. As an all-around soldier for the Medical Corps, Maj. Piper will be hard to replace. He has been through so many encampments, and his experience with the sanitation of camps and care of the soldiers has been so complete and so valuable that he will be missed throughout the entire camp.

A number of invitations have come to him from time to time to attach himself to the regular army medical department, and on his examinations for Federal authorities, he had qualified with high grades. The trouble with one of his eyes, according to the examining officers, is one which glasses will not correct, and one upon which the Government allows no discretion by examining physicians, or he might have been saved to the service. He is giving the camp the benefit of his knowledge and experience before returning to his home.

The annual outing of the Fayette County Medical Society was held Tuesday afternoon and evening, July 11, and included an automobile trip, a barge ride up the river, a half hour of bathing, supper, fireworks and dancing.

About seventy-five of the Lexington doctors and their friends including a number of Lexington business men and physicians from other communities, left in automobiles Tuesday afternoon and took the barge at Shyroek's landing. The trip was made up the river as far as the locks, and on the way a stop was made while many of the party took a swim.

At Ferncliff the barge was stopped while the young people camping there were taken aboard and an impromptu dancing party held.

The excursion was in charge of Dr. L. C. Red-

mon, secretary of the Society who had prepared an unusually fine supper of cold chicken, old ham, sandwiches, salads and pie.

The excursionists returned home about eleven o'clock after a very delightful outing. Those in the party included Dr. J. A. Orr, of Paris; W. M. Elliott, of Lancaster; J. D. Jackson and W. H. Smith, of Danville; George Wilson, W. T. Briggs, C. A. Fish, of Frankfort; Louis Mulligan, W. D. Reddish, I. H. Brown, of Winchester; W. O. Bullock, C. B. Duerson, Mt. Sterling; S. A. Blackburn, Versailles; W. C. Ussery, Paris; Leigh Gordon, E. B. Bradley, L. C. Redmon, J. D. Kiser, J. T. McClymonds, J. W. Pryor, N. Oberdorfer, M. J. Stern, S. E. Spratt, Mt. Sterling; U. V. Williams, Frankfort; N. M. Garrett, Frankfort; E. F. Beard, S. J. Andrews, Midway; R. H. Upington, Paris; W. E. Risque, W. N. Offutt, W. B. Pinnell, J. F. Reynolds, Charles Voorhies, Carl Wheeler, Will Stucky, B. F. Van Meter, C. C. Garr, R. M. Coleman, W. S. Wyatt, W. R. Thompson, Mt. Sterling; R. E. May, Porter Prather, L. V. Williams, Nicholasville; C. G. Daugherty, Paris; R. D. Carman, Paintlick; A. K. Keller, Paris; Vance Rawson, Danville; G. F. McKim, Cincinnati; E. O. Smith, Cincinnati; Woolfolk Barrow, T. R. Weleh, M. V. Pence, Nicholasville; George F. Doyle, Winchester; S. M. Steadman, Versailles; W. C. McCauley, Versailles; J. E. Wells, Cynthia; Josephus Martin, John McMullen, C. A. Vance and J. A. Goodson.

There were also the following guests from Lexington: Messrs. R. R. Harting, Ralph McCracken, W. E. Freeman, Frank B. Jones, J. M. Roche, John Gund, S. B. Featherston, Griffin Cochran, R. Lee Cassell, G. N. Pettit.

Miss Margaret Colvin, visiting nurse for Muhlenberg county, reports that during the last five months she has visited tubercular patients 500 times and has at present more than 100 tubercular cases on hand, having discovered thirty-six new cases in that time. During that period there have been nineteen deaths of tuberculosis in the county.

Four free trachoma clinics have been held since the first of February at which sixty-six operations and more than 300 operations have been made in the county.

The Central Kentucky Medical Association met in the parlors of the Elks Club Danville, July 19th, at which a delightful dinner was served by Mr. Renner of the depot lunch room. Papers were read by Dr. George Cowan and Dr. Vance Rawson, following which a general discussion was participated in by all present, and much interest and enthusiasm was manifested in the determination to increase professional ability and service. Four new members were admitted and the next meeting is to be held in Lancaster. The following physicians were present: From Mercer county, Drs. Price, Powell and

Johnson. From Garrard county, Drs. Kinnaird, Acton and Kinnaird; From Lincoln county, Drs. Carpenter, Brown and Southard. From Boyle county, Drs. Cowan, Hopper, Godby, Pittman, Montgomery, Griffin, Rawmon and Cowan.

Dr. J. R. Paine, of Pembroke, was severely injured Wednesday night, July 5th, about 10 o'clock while making a call near Trenton. A little negro boy was with him in his buggy and in turning out to meet a wagon in the road Dr. Paine's buggy was turned over. He fell with such force as to break his hip. The boy escaped injury.

Dr. Paine was taken to his home in an automobile and received prompt surgical attention. Dr. Paine is one of the prominent physicians of the county and is 70 years of age.

His condition is as satisfactory as could be expected, but he will be laid up for a long time.

The State Board of Health has issued a bulletin on Infantile Paralysis from which we clip the following:

Whereas, Infantile Paralysis, essentially a disease of cities and towns and of childhood, though sometimes occurring in country districts and in adults, exists in a severe epidemic form in New York and has already spread to other sections, eight positive or suspicious cases having been reported in this State within the last twenty-four hours, the disease having an average death rate of about 25 per cent. and a large portion of those surviving being more or less completely paralyzed, and, whereas, everywhere the tendency of the disease is to break over official control and spread, especially in the presence of filth and flies in and about the homes, yards, alleys and streets.

The State Board of Health, hereby urges and directs that the health and civil authorities of every city and town in Kentucky take immediate steps to clean all alleys, streets, tenements, public places and vacant lots and, by rigid and systematic inspection, to require the cleaning and liming of all back yards, cellars and premises, and the thorough screening of homes.

Dr. Isaac Brown, health officer of Winchester, was in Lexington and conferred with Dr. John D. Maguire, health officer of Lexington, and other physicians relative to handling the infantile paralysis case which has appeared in that city.

Dr. Brown assured Dr. Maguire that the Winchester public health department is doing everything possible to confine the disease to the district where it has been discovered, and with prompt precautionary measures both here and Winchester, Health Officer Maguire is confident that the disease will not spread.

A number of Lexington physicians went to Georgetown Thursday, July 13, to participate in

the eighty-second quarterly meeting of the Kentucky Midland Medical Society which was attended by prominent doctors from Shelby, Bourbon, Fayette, Franklin, Jessamine, Harrison, Clark, Woodford and Scott counties.

The session was held in the Georgetown city hall and the program proved a most instructive and entertaining one. Among the speakers and subjects were: "The Diagnosis," Dr. C. W. Dowden, Louisville; "Medical Aspect," Dr. Robert W. Porter; "Surgical Aspect," Dr. B. F. VanMeter, Lexington; "Oto-laryngologists' Aspect," Dr. William S. Stucky, Lexington.

Dr. L. E. Minish, of Frankfort, is the president of the association and Dr. W. S. Wyatt, of Lexington, secretary.

The visitors were the guests at dinner at the Lancaster hotel of the Scott County Medical Association, of which Dr. Charles T. Lancaster is president.

Dr. George W. Righter age 72 years died of hardening of the arteries, having been confined to his bed for fifteen weeks.

Dr. Righter was born in Harrison county, Mo., 16, 1844. He was the son of John B. and Rebecca Smith Righter. He assisted his father in farming pursuits until the beginning of the Civil War, when in September, 1863, he enlisted as a private in Col. W. C. P. Breckinridge's Ninth Kentucky Cavalry under Captain J. News Frazer and served with credit, commanded by General Joe Wheeler. He served until the close of the war, surrendering May 20, 1865, at Washington, Ga., when he returned to the Kentucky farm. He was a member of the Cynthiana Commandery of Knights Templar, and manifesting a deep interest in the old comrades in arms he became a member of the Confederate Veteran Association at Lexington. Dr. Righter is survived by his wife, who was Mrs. Lucy Mullen Henry, and two sisters, Mrs. Mollie Fowler and Miss Jennie Righter, of this city.

A joint meeting of the McCracken, Graves and Marshall county medical societies was held July 27 at Hale Springs, in Marshall county. A barbecue was arranged.

The Bell County Medical Society met July 21, at the office of Dr. O. P. Nuckols, who is noted for his welcome to these meetings. Those present were:

Dr. C. C. Durham, Dr. J. G. Foley and Dr. O. P. Nuckols of Pineville; Dr. C. K. Brashear and Dr. T. T. Gibson, of Middlesboro, and Dr. C. T. Clayton, of Arjay.

Dr. W. W. Durham, one of the leading physicians and citizens of North Christian, has been named by the Board of Control of Charitable Institutions as second assistant physician at the Western State Hospital. Dr. Durham assumed

the duties of his office July 1. He succeeds Dr. Roy Robinson, who resigned to enter the practice of medicine at Madisonville. Dr. Durham is a Republican in politics, and is a prominent man in the affairs of the county. He is a member of the Christian County Highway Commission.

Dr. Fred La Rue, of Smithland, on August 1, will succeed Dr. H. F. Sights, who has for the past seven years been superintendent of the Western Kentucky Asylum for the Insane. Dr. Sights expected to be relieved July 1, but the date for making the change was postponed. Dr. Sights will return to his former home at Paducah, but is preparing to open a sanitarium at Dawson in the near future. Dr. Roy Robinson retired as assistant physicians and has been succeeded by Dr. W. W. Durham, of this county. Sam Byars, of Todd, will succeed W. J. Chiles, as steward.

The medical department of the United States army has issued a call for recruits who are pharmacists, or who have some knowledge of cooking. There is a great need for men in both of these departments, and plans have been made to give them rapid promotion. Those recruits who enter as pharmacists may be promoted to the rank of Sergeant when qualified, and men possessing some knowledge of cooking, may, when they have satisfactorily demonstrated their ability, be appointed as cooks.

Dr. B. F. Reynolds, of Carlisle, was called to the Barterville section recently on professional duty, and while returning home about 2 a. m. his machine stuck in the mud where a bridge is being built on the Barterville road, about 1-2 mile from its intersection with the Maysville & Lexington pike. After resorting to all manner of means to pull out, he was forced to abandon the idea, and later was given lodging at the home of Arris Wiggins. The doctor says that Mr. Wiggins certainly has two very large watch dogs.

Surgeon John McMullen, of the United States Public Health Service, conducted a trachoma clinic at the Pikeville College at the request of the Pike County Medical Society, members of which took part in the clinic. The Kentucky Society for the Prevention of Blindness, the Kentucky State Board of Health and the Kentucky State Tuberculosis Commission each had a representative present, both to assist in the clinic and to seize the opportunities offered for arousing Pike county people to concerted action for the prevention, not only of blindness, but also of tuberculosis and other diseases.

Saturday, July 15, a mass meeting was held to consider the establishing of public health nursing. Of the fifty sufferers who were examin-

ed twenty-two needed facial operations. The pupils of the Kentucky Home School of Louisville are contributing some money toward the expenses of this clinic.

Dr. Wayne White, of Oakland, who recently passed the examination before the State Medical Board, registered his certificate in the Clerk's office and will practice at Oakland.

Dr. J. S. Anderson, the former Kingston negro herb doctor, is again in Roane county, this time as the guest of Sheriff Roberts, at the jail in Kingston. The sheriff and Marshal W. S. Eide, of Rockwood, arrived July 17 at noon from Somerset, having the negro in custody. He is under indictment in this county on a number of charges, and failing to appear for trial, his bondsmen became uneasy and had the negro brought back. He was accompanied by two lawyers from the Kentucky town, and will begin another fight for his freedom. In the meantime he will be given a berth in the Roane county jail. Anderson, after a meteoric career in Roane county, was finally banished from the state after much litigation. He has been practicing at Somerset since leaving Kingston, and it is understood, that prosecutions have been started against him there by the Kentucky State Medical Association.

Smallpox has broken out in the mobilization camp of the Kentucky brigade. A Breathitt county soldier is the victim. General vaccination has been ordered.

J. J. Rodman left July 20, for Colorado Springs, Colo., for a month's rest and a visit with his daughter, Sister Rose, who is stationed there.

"War on weeds" is now the slogan of Trenton and both municipal and civic bodies are working for a clean and healthy city. The City Council has passed an ordinance with August 1 as the time limit and a penalty of from \$1 to \$5 for failure to clean up by that time.

Dr. E. D. Covington of Hardin, has gone to Dawson Springs for a few days vacation.

Dr. G. R. Keen, of Scottsville, accompanied by Mrs. Keen, attended the Barren County Medical Association at the July meeting.

Two days each week have been found necessary to attend to the work of the free clinic established by Miss Shaffer, the county nurse of Nicholas county, and the clinic will be held two days instead of one each week, as was first planned. Miss Shaffer has been designated as nurse for the Metropolitan Life Insurance Company here.

Dr. J. L. Anderson, of Manchester has been very ill for the past week, and is improving very slowly.

Dr. D. P. Curry, State Sanitary Engineer of the State Board of Health, was at Richmond July 21, 1916, to make a report on the conditions found.

Dr. Curry, in company with Mr. Merrill and Mr. Dougherty, of the Water Company, and Drs. Bosley and Jasper of the County Board of Health, made an exhaustive survey of the Water Company's plant and storage reservoirs and the water shed.

Dr. Curry said that in making his report to the Board he would recommend filtration of the city's water supply, as the conditions indicated that the present equipment of the Water Company was adequate to secure a safe potable supply of water practically free from visible turbidity and sediment and also free from dangerous bacteria. He did say, however, that to make the water free from any threat of contamination, it was necessary to more thoroughly protect the water shed. A number of houses were found upon this area, the drainage from which would run directly into the lakes in time of copious rainfall.

A list of the occupants of these homes was obtained and Dr. Curry will recommend that the State Board issue an order to each householder that he install a sanitary vault or sewerage system after plans furnished by the Board, which will completely destroy all such wastes upon the premises of the owner.

Dr. Curry said that the means of purifying the water was exactly similar to that used by New York City, and that it had proven an unqualified success.

Governor Stanley has reappointed as superintendent of the Eastern State Hospital Dr. J. A. Goodson. Dr. Minnie Dunlap and Steward John H. Reid have also been retained.

Dr. Charles Voorhees, of Lexington, has been appointed third assistant physician at the State Hospital at Lakeland.

One of the most interesting features of the Teachers' Institute, which was held in Somerset was the address before that body by Dr. A. W. Cain, of Somerset, on the subject of "Sanitation; Ventilation, Cleanliness, and Preventative Diseases." This address was delivered on Thursday Morning at 9 o'clock, July 13, and was not only interesting and entertaining, but of the most instructive character.

Dr. Josephine Hoggins, of Frankfort is spending some time in Louisville.

Dr. Eldon Stone, a graduate of the medical department of Vanderbilt University at

Nashville, 1914, and for the past year interne at St. Vincent hospital at Indianapolis, Ind., has located in Bowling Green to practice his profession. He is a nephew of Dr. Thomas W. Stone, a leading physician of Bowling Green, and a son of Mr. and Mrs. Henry E. Stone of the same place.

Dr. I. J. Townes, of Madisonville, has moved his office to the second story of the McLeod building.

Dr. and Mrs. R. E. Taylor returned to their home at Chilton, July 16. The doctor had been down several weeks at Liberty with fever but is about well.

Dr. R. A. Tate, of Little Rock, Arkansas, is at Somerset on a visit to his brothers, Dr. M. E. Tate and Luther Tate. He has been located in the Arkansas capital for two years, and has taken a front rank in the dental profession in that city. Dr. Tate has also become quite a factor in the social and business life of his home city, and is a leading young man. It gives us pleasure to note the success attained by Pulaski boys in other lands, and we are proud of Dr. Tate.

Services in memory of the late Dr. E. O. Guerrant was held at Highland College, in Breathitt county, Sunday, July 23, at 11 o'clock. An interesting program had been arranged for the occasion. The people of Kentucky's mountains knew and loved Dr. Guerrant, and it is doubtful if any will miss his kindly administrations more than they.

Dr. and Mrs. J. W. Boyd of Cynthiana, have returned from Mudlavia, Indiana, and the doctor who has been afflicted with rheumatism, appears much improved and is able to take care of his patients in his new office quarters over Prather's store.

In an electrical storm recently lightning struck the corner of Dr. J. W. Strother's house, near Grayson, and did considerable damage. One door casing was knocked out and the house given a general shaking up.

The concrete around the cistern was broken into small pieces by the jar. The family were all in one room and did not suffer any injuries more than the excitement.

A goodly number of physicians from several Kentucky towns gathered at Georgetown Thursday, July 13, for the quarterly meeting of the Kentucky Midland Medical Association.

Rheumatism in all its stages was ably discussed by eminent Kentucky doctors. At noon the visitors were entertained at dinner by the Scott county organization. There were present

Drs. U. V. Williams, Maston, Minish, Montfort, and Garrett, of Frankfort; Louis Frank, Dowden, and Owens, Louisville; H. G. Herring, Stucky, VanMeter, Redman, and Vance, Lexington; Linville, Centerville; Risk and Anderson, Midway; Beard, Shelbyville; Towles, Lawrenceburg; J. C. Thomasson, D. B. Knox, E. C. Barlow, J. A. Lewis, L. F. Heath, J. E. Pack, J. W. Crain, W. H. Coffman, H. V. Johnson, R. W. Porter, A. B. Coons, William Salin, William Mason.

Dr. F. A. Taylor, one of the most prominent physicians in Pulaski county, has returned from a three weeks' stay at Martinsville, Indiana. Dr. Taylor is much improved in health, and seems to have been greatly benefitted by his vacation. He is the father of Capt. W. S. Taylor, of the K.N. G., and is very proud of his soldier boy.

Dr. M. C. Dunn, age fifty-two, president of the Henderson school board and widely known among physicians in Kentucky, was shot and killed in the street of that city by Charles M. Wyne, age thirty-one, a carriage worker.

Wyne recently filed suit against Dr. Dunn for \$10,000 damages, alleging that the physician had attacked Mrs. Wyne in his office. Wyne was taken into custody.

With the death of Dr. H. W. Coombs, of Glasgow, is removed a fine man, a splendid citizen and a well-known physician, who has cared for the people of this county through sickness and through death for almost half a century.

Dr. Coombs was born in Louisville in 1846 and would have been seventy years of age the 15th of this month. He was reared in Hardin county, but came to Barren when quite a young man and spent the greater part of his life here. He began the practice of medicine at Goodnight over forty years ago and most of his life was spent in that section. Up until about a year or so ago he continued his practice till forced to give it up because of ill health. After much suffering and great forbearance he departed this life Wednesday night August 2, about 12 o'clock at his home in Cave City.

Dr. Fred La Rue, of Smithland, has assumed charge of the Western Kentucky Hospital for the Insane, near Hopkinsville, succeeding Dr. H. P. Sights, who was not an applicant for re-appointment. Dr. Louise Trigg, of Glasgow succeeds Dr. U. G. Davis, as third assistant physician. S. H. Byers, of Todd county, became steward at the hospital to-day vice William J. Chiles.

Dr. Hubert Isaacs, of Bee Lick, one of the bright promising young physicians of Pulaski county, will leave with his family for Indiana, where he will locate. Dr. Isaacs is the son of that good physician, Dr. George W.

Isaacs, of Woodstock, and a few years ago graduated with honors from the University of Louisville. Since then he has been practicing medicine with success in Northern Pulaski.

Dr. Dunning Wilson, head of Waverly Hill Sanatorium, forwarded his resignation from Ft. Thomas because he thought it was desired. President Dittmar said he believed Dr. Wilson would be re-elected when he returned from service with the First Regiment.

Dr. S. M. Richie, of Hazard, Ky., moved his family to Dwarf. Dr. and Mrs. Richie have many friends who will wish them success in their new location.

News has reached here of the death of Dr. James H. Holloway, which took place Wednesday afternoon, August 2 in a sanatorium at Albuquerque, N. M. He had been in ill health for the past four years. Dr. Holloway's relatives were notified a week ago of his critical condition and his brother, J. S. W. Holloway, left at once to be with him. Dr. Holloway was 42 years old. He was the youngest son of Colonel and Mrs. J. H. Holloway and is survived by his aged mother, Mrs. Mollie Williams Holloway, a sister, Mrs. T. W. L. Van Meter and two brothers, Patton and J. S. W. Holloway. About sixteen years ago he entered the United States army, where he gave splendid service, and at the time of his death was retired with the rank of surgeon. When his health declined he went to North Carolina and later went to make his home in New Mexico. Dr. Holloway was a grandson of General John S. Williams and was descended from a number of other famous soldiers and statesmen. He was a man of splendid character and had many friends here who are shocked and grieved at his passing away.

Are doctors naturally poor collectors?

Or why is it that so many of them permit their outstanding collections to get into such deplorable shape?

Undoubtedly there is quite a 'knack' in collecting. If your own efforts are not getting the money, then by all means place your accounts in the proper hands for expert attention, for the longer the accounts stand the less you will realize on them. It's now generally conceded, too, that a number of bad accounts foretells declining prestige.

Read the ad. of the Publishers Adjusting Association on page vi. and send them your business. Firm, though diplomatic, their efforts should get you the money.

The most dangerous disease and one that proves fatal to the greatest number was consumption.—Hippocrates.

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NEXT MEETING STATE ASSOCIATION.
HOPKINSVILLE, OCT. 17, 18, 19, 20, 1916

COUNTY SOCIETY REPORTS

Barren—The Barren County Medical Society met in Dr. Botts's office, Glasgow, July 17, 1916, with the following members and visitors an attendance:

Biggers. Jones, Smock, York, Botts, Acton, Siddens, Taylor, Howard Porter, Palmore, Ferguson, Miller, Carroll, White, Depp, and Turner. Visitors, J. T. Hughes, Fountain Run; J. O. Carson, Bowling Green; G. R. Keen, Scottsville; P. D. Harvey, Knob Lick; Dr. H. P. Honaker, Horse Cave, and Dr. J. E. Comstock, Horse Cave.

The meeting was called to order by President Smock at 10 o'clock a. m.

The reading of the minutes of the previous meeting was dispensed with.

The President extended a cordial welcome to visiting physicians, and asked them to seats as honorary members.

Several interesting clinical cases were presented, with the history and treatment, and the general discussion which followed was interesting and instructive. A case of Hodgkins disease attracted much attention, the patient being a boy ten years old "who had suffered many things of many doctors," including the X-ray treatment by a Louisville specialist, all resulting in failure. A case of middle ear disease was examined and lucidly described by Dr. J. O. Carson, a Bowling Green specialist.

J. O. Carson spoke at some length on the infections of the nose, throat, and respiratory passages, which was highly appreciated for he evidently knew his subject.

The noon hour having arrived, the society adjourned to meet in the Christian church at 2 o'clock p. m.

We were not idle during the noon recess. Our force, more than thirty strong, invaded the Murrell Hotel. and became their happy guests. A splendid dinner was served, and was enjoyed by all in the highest degree. Doctors Hughes, Keen, Ferguson, Palmore and Depp honored themselves as well as the medical fraternity by bringing their ladies to the feast, whose presence added cheer and sunshine to the occasion.

Promptly at 2 o'clock the President called the meeting to order at the Christian church. After a short prayer by Rev. A. D. Litchfield, the program as arranged by the committee, was taken up.

J. O. Carson delivered a splendid address on "Some of the Ailments of Childhood, and How to Prevent Them." His talk was plain, pointed and devoid of unnecessary technicalities. The mothers of the audience were especially pleased with the address.

J. E. Comstock commented favorably on Dr. Carson's address, and added some valuable ideas of his own. His address was too short.

Rev. Litchfield read an amusing paper depict-

ing many funny things connected with the doctor's life.

Attorney Paul Green followed in a similar strain, his text being "Woe Unto Ye Lawyers and Doctors." These funny jokes and witticisms were highly enjoyed—by the audience.

J. M. Taylor's poem on the "Lights and Shadows of a Doctor's Life" was listened to with considerable interest, but the opinion prevailed that the writer's rather homely effusion contained more truth than poetry.

Hon. William Henry Jones, in response to calls from the audience, came forward and delivered a short but appropriate address on the status of the medical profession as compared with the other professions. He eulogized the doctor for his unselfish charity work, and laid great stress upon the fact that the doctors are our greatest and most earnest workers for sanitation, and yet the observance of sanitary laws diminishes the amount of sickness, and thereby diminish the income of the medical profession.

There being no further business, a motion carried that we adjourn to meet August 16, 1916.

C. C. TURNER, Secretary.

Christian—The July meeting of the Christian County Medical Society was held on Tuesday, July 18, 1916. The society was the guest of Dr. H. P. Sights and the Medical Staff of the Western State Hospital.

As Dr. Sights was soon to retire from the Institution, the attendance was large in recognition of his efficiency as superintendent of the Western State Hospital. The society was called to order promptly at 11:15 a. m., and the following papers read and discussed with an adjournment for an elegant lunch at the noon hour.

R. L. Woodward read an interesting paper on "Surgery in Typhoid Fever."

H. P. Sights followed with a paper on "Duties of the Medical Profession in the Prevention of Disease."

D. H. Erkiletian read a paper on "Infantile Spinal Paralysis."

Before final adjournment the following was unanimously adopted:

"Whereas, in the prevention of all forms of disease, mental and physical, the development in early life of a high degree of mental and physical efficiency is most important.

"Whereas, military training promotes in the individual, strength of muscle and bony tissues, improves organic functions, quickens perception, promotes discipline and self control, inculcates obedience, creates respect for authority.

"Wherefore, be it resolved, that this society strongly recommends universal military training and urges legislation to this end, not in the interest of preparedness but solely in the interest of Public Health."

J. W. HARNED, Secretary.

Russell—I will ask the members of the Russell County Medical Society to excuse me for not reporting the annual meeting, December, 1915, sooner than this late hour.

Our meeting was held at Jamestown, at the Holt Hotel. Proceeded to business at follows:

Call to order by L. D. Hammond, President; prayer by J. H. Stone; address by the President; which was good and listened to attentively by all present. Then there were addresses by Drs. Blair, Tartar, Flanagan. Rowe, Lawrence and by Scholl on "Vital Statistics."

No new business; no unfinished business; report of Secretary-Treasurer read and accepted.

There were no new members for election. All the doctors present paid their dues and all others except one, sent their dues, hence this just leaves one member in the county in active practice who has not paid dues up to this meeting, but am sure he will send them to the secretary soon, as he has been faithful to attend those meetings that he could. The members who were present helped in every way they could to make it an extra good meeting and were as follows: J. B. Tartar, J. S. Rowe, J. M. Blair, L. D. Hammond, Flanagan, M. M. Lawrence and J. B. Scholl.

W. D. G. Flannagan made a motion seconded by Drs. Tartar and Blair, that we have about 1500 letter heads and envelopes nicely printed with the name of the society and each member's name on the letter heads. The motion carried and the Secretary was ordered to have the work done. But as all the members had not paid at that time and fearing that some of the members might not want their names on the letter heads, as was indicated by one of the members who said to me that if it was alright with me to leave his name off the letter heads, I have not had the printing done, preferring to wait until next meeting to get further orders as to what to do. I hope by that time that all will be present and agree to their names being printed on the letter heads.

Next in order was the election of officers for 1916. The President appointed Drs. Blair and Flannagan as a Nominating Committee. The following were nominated and elected for 1916:

L. D. Hammond, President; J. B. Tartar, First Vice President; J. S. Rowe, Second Vice President; W. G. D. Flanagan, Censor for 2 years; J. M. Blair, Censor for 3 years; M. M. Lawrence, Censor for 1 year; J. B. Scholl, Secretary-Treasurer; M. M. Lawrence, Delegate to State Meeting; J. B. Scholl, Alternate.

The session lasted for several hours before and after noon and was a good, lively meeting for the good of the Russell County Medical Society and 1915 was the best year of the society, so far as attendance was concerned.

Each member of the society is ready to "go off" at anytime upon call of the President. So you see lots of this "go off" helps to make a good society.

Frequently during the meeting there would be

two or three on the floor trying to be heard and all were heard before they would quit.

It is just my delight to get to hear these doctors wrangle over some difficult subject for before they get through they bring out all there is in a subject. When some doctors ride ten or twelve miles through mud and snow to a society meeting you know they mean business.

The society adjourned very late in the afternoon, to meet in February, but the weather was so bad the President suggested that the meeting be postponed until April.

In May the society met at the Holt Hotel. There were three members present and we had a very interesting meeting. The President then fixed upon August 12 as the date for a big meeting of the Russell County Medical Society and the old Russell Springs District Society to meet at Russell Springs. The program will be elaborate and some good doctors from a distance have promised to be with us. Dr. A. W. Cain, Councilor for this district, promises to be with us a day or two if the meeting lasts that long. It has been suggested that we have a two days' session. It will take that long if the clinical material increases like it has for the past year. I judge it will take two-thirds of the day to dispose of the clinic, as people are beginning to see what our societies are trying to do for them. Hoping to write up the next meeting that it was the biggest meeting we have ever had. The meeting adjourned very late to meet in February, April and May.

No further business before the society on motion of Dr. Flanagan, seconded by Dr. Blair, the meeting stood adjourned.

As we left Jamestown late

The Curfew was tolling the knell of parting day,

The lowing herds, lowed and winding

Slowly over the Lea. The ploughme and

Us Doctors homeward plodded our weary way,
And left this world to darkness and to us."

When I reached home I was nearly frozen and much fatigued, but after a few minutes by a good fire and a toddy and good supper I was resuscitated. I then retired to bed and falling asleep dreamed some pleasant and some unpleasant dreams. The pleasant dreams were connected with our county society and every member, and then all the societies up to the A. M. A., and back again several times, about the good meetings we have had during the year and all the doctors at peace with one another.

The unpleasant dream was of my old saddle horse, "Fox," who has carried me to all the meetings for nineteen years. He was use to fox-chasing and it excites him to hear the yelp of a hound or the toot of the hunters horn, so I dreamed that as I came back that night my horse became frightened at a yelp from the hounds and the toot of the huntsman's horn and jumped a barbed wire fence with me into a bottom field

and ran his leg through a large pumpkin with about twenty-five yards of vine intact, and this, as he ran slipped up and down on his leg increasing his fright very much. That he ran through a chicasaw plum thicket and there I left most of my rags and one of my eyes hanging on one of those plum bushes. and when I got home I had my transverse colon wrapped around the pommel of the saddle and my liver wrapped up in a newspaper.

J. B. SCHOLL, Secretary.

Warren—The Warren County Medical Society held its regular meeting August 9th, 1916. The following members were present: Drs. T. W. Stone, J. F. Rogers, John Blackburn, A. T. McCormack, E. N. Hall, T. O. Helm, W. A. Strother, R. C. Moss. Hal Neal, B. S. Rutherford, T. H. Singleton, W. F. Arnold, L. H. South, F. D. Cartwright and W. P. Drake.

John Blackburn presented a case resembling lupus vulgaris, which was a very interesting case and was discussed by the entire membership.

A. T. McCormack discussed in connection the cost of treatment in this case, the features of the Workmen's Compensation Law.

T. W. Stone made a very interesting and valuable talk on the use and abuse of pituitrin in the management of labor, which was discussed by Drs. Rutherford, Hall, Helm, Singleton, Moss, Neal, Strother, McCormack, Blackburn and Arnold.

Our last meeting was a very interesting one, and we hope to make each succeeding one better.

W. P. DRAKE, Secretary.

Thymus and Pituitary in Dementia Praecox.—

In a group of cases of dementia praecox examined by Ludlum and Corson-White, Abderhalden reactions were obtained in some instances to testicle and pancreas; and in others to testicle and thyroid; while in still others no reaction could be secured. In the individuals that gave the reactions to testicle and pancreas, there were observed physiologic symptoms of the same type as those found in animals from which the thymus had been removed. In examining the blood of animals whose thymus had been removed, the same reactions were obtained as in the cases of a certain group of patients, indicating that in this group there exists a disease entity. With regard to the pituitary, there were a considerable number of cases with the symptoms of dyspituitarism that improved with pituitary extract. There were also a group of cases of hyperpituitarism that improved with the opposite organic extract, which is the Brown-Sequard fluid.

If the patient (consumptive) is treated from the beginning he gets well.—Hippocrates.

HOPKINSVILLE NUMBER

KENTUCKY MEDICAL JOURNAL

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No. 10

EDITORIAL

TO HOPKINSVILLE.

We hope every reader of the JOURNAL will be looking up the most direct route to Hopkinsville when this number meets his eye. Those in the Western part of the State can reach Hopkinsville easily by train or motor almost any hour of the day. For our Eastern Kentucky friends, special arrangements are being made through the activities of Mr. T. W. Singer, the special representative of the A. M. A. in Kentucky. Mr. Singer's address is 506 South Third Street, Louisville. He is arranging special sleepers to leave Louisville over the L. & N. both Monday and Tuesday nights of the meeting. You should write him to-day, asking him to reserve a berth for you. The sleeper will go direct from Louisville to Hopkinsville without changing trains. The House of Delegates will meet Tuesday, October 24, and all the Eastern Kentucky delegates should leave Louisville Monday night. Those who desire to attend the scientific sessions can leave on Tuesday night, as these will begin on Wednesday, October 25 and continue throughout the 26th and 27th. Be sure to get a certificate from your ticket agent so you can get your return ticket at a reduced rate. If the agent has not received notice, tell him that the certificate is issued under Joint Passenger Tariff no. Exc. 6803. It is essential that this certificate be secured, as otherwise reduced fare returning cannot be gotten.

On other pages of this issue we are publishing something about Hopkinsville. It is a city which is really worth seeing. There is a spirit of unity and harmony amongst its citizens which we hope is contagious and can be carried back to every other place in Kentucky. If they have any "knockers" in Hopkinsville their feeble voices are drowned in the uniform praise and pride expressed by every one who lives or visits here. It is the home of one of the oldest aristocracies in Ken-

tucky, having been settled in the very dawn of the history of the State by the younger sons and daughters from the plantations of Virginia, and on this old stock it has grafted the virile, busy new citizenship that is getting results.

From an agricultural standpoint, Christian County is one of the best in the State and the very large number of doctors who own and operate farms can learn something from the thrift and success there.

We have promised our exhibitors that a third of the doctors in Kentucky will be in Hopkinsville from October 25-27 inclusive. Will you not help us to make this guarantee good by going yourself and urging all of your medical friends to attend?

FORTY YEARS AGO.

Under official announcements we are publishing the minutes of the proceedings of the Twenty-first Annual Session of this Association held forty years ago in the City of Hopkinsville. Dr. L. B. Hickman, the distinguished father-in-law of Dr. R. L. Woodard, the Chairman of the Committee on Arrangements, was then the Chairman of the Committee on Arrangements. A majority of those present have gone to their great reward. It will be recalled that there was then no State Board of Health, a wholly inadequate vital statistics law which cost more than the present effective law; and it will be noted that there were fewer in attendance at this Annual Session than are frequently present at the meetings of the Christian County Medical Society. Our distinguished predecessors accomplished great things in those days, however, and it is our duty and opportunity with our far more effective organization to accomplish much more. We trust there will be ten times as many present in 1916 as there were in 1876.

DR. VERNON ROBINS.

It is with much regret that we note in the daily press that Dr. Vernon Robins, has asked for a leave of absence for eight months with a view to taking a course in the School for Health Officers at Harvard University. Dr. Robins has been City Bacteriologist of Louisville for many years. He created its laboratory and his personal work has made it such as would be a credit to any city in the country. The whole State owes him a debt of gratitude because he has many times helped in work outside of his own jurisdiction in a public spirited way which has gotten great results. For many years it was the privilege of the writer to examine Dr. Robins' students when he was a teacher of Bacteriology, and they averaged between 20 and 30 per cent. higher in their grades than those examined from other schools. This was a tribute not only to his skill as a bacteriologist but to his efficiency as a teacher.

It is a matter of regret to all interested in Kentucky and its future that men of Dr. Robins' type do not receive sufficient remuneration to warrant their remaining in Kentucky, but are constantly accepting calls at largely increased salaries to other places where their real worth is appreciated. The best wishes from every Kentucky physician will go with Dr. Robins during his studies in Boston and throughout the active and valuable career which awaits him wherever he may locate.

DR. VON EZDORF.

Dr. R. H. von Ezdorf, Surgeon of the U. S. Public Health Service and one of the five leading experts in America on the subject of Malaria, died suddenly in North Carolina last week. It is fortunate for the profession that Drs. Joseph White and Henry R. Carter, of the Service, and Drs. Bass, of New Orleans, and Leathers, of Mississippi, are still young and active enough to continue the great work which they have all been conducting in this fruitful field of preventive medicine.

Dr. von Ezdorf was one of the most affable leaders of men we have ever known. He had a pleasing way of telling the driest scientific facts that made them interesting. In Kentucky we had begun to feel that malaria was a time-worn subject, and many of us knew very little about it, with as much experience as we thought we had, until we heard or read the addresses of Drs. von Ezdorf and Leathers on the subject. Thousands of square miles of land all over the South will be made available for a healthy population through the efforts and labors of these men.

It is well for us all to pause at the death of

such a man as von Ezdorf and add a tribute even after his death to the many that it was our pleasure to pay him while he lived and worked amongst us.

OFFICIAL ANNOUNCEMENTS

PROGRAM OF THE GENERAL MEETING OF THE KENTUCKY STATE MEDICAL ASSOCIATION

WEDNESDAY, OCTOBER 25, 1916—9 A. M.

Call to Order by the President... J. W. KINCAID, M. D., Catlettsburg
 Invocation REV. J. N. JESSUP, Hopkinsville
 Address of Welcome for City of Hopkinsville T. C. UNDERWOOD, Hopkinsville
 Adresse of Welcome for Christian County Medical Society H. C. BEAZLEY, M. D., Hopkinsville
 Response to Address of Welcome W. G. KINSOLVING, M. D., Eddyville
 Installation of the President
 Report of Committee on Arrangements R. L. WOODWARD, M. D., Chairman, Hopkinsville

SCIENTIFIC SESSION—10 TO 12 A. M.

Diabetes Mellitus, Cause and Treatment C. W. DOWDEN, M. D., Louisville
 Functional Heart Diseases: What Are They and How Treated. B. B. KEYS, M. D., Murray
 Training Physicians for Social Health Work. P. E. BLACERBY, M. D., Erlanger
 Simple Modification of Milk for the Baby. D. H. MCKINLEY, M. D., Winchester

SPECIAL ORDER AT 12 M.

Oration in Medicine—"The Future of the Medical Profession in Kentucky"... E. A. STEVENS, M. D., Mayfield

WEDNESDAY AFTERNOON, OCTOBER 25.

SCIENTIFIC SESSION—2 P. M.

Non-Tubercular Infections of the Kidney C. G. HOFFMAN, M. D., Louisville
 Urinary Tuberculosis. CARL L. WHEELER, M. D., Lexington
 Splenomegaly of Congenital Syphilis. CHARLES A. VANCE, M. D., Lexington
 Suppurative Ears; Their Relation to Life Insurance Risks A. O. PFINGST, M. D., Louisville
 Tuberculosis: Its Relation to Life Insurance Risks WILLIAM R. THOMPSON, M. D., Mt. Sterling
 Rational Management of Typhoid Fever S. M. CROWE, M. D., Centertown
 Tubercular Meningitis. ROWAN MORRISON, M. D., Louisville

WEDNESDAY EVENING, OCTOBER 25.

Malaria (lantern slides) C. C. BASS, New Orleans
 Prevention and Early Diagnosis of Cancer (lantern slides) J. C. BLOODGOOD, Baltimore, Md

THURSDAY MORNING, OCTOBER 26.

SCIENTIFIC SESSION—8:30 A. M.

Some Important Diagnostic Points the General Practitioner Should Know About the Ear. SELDON COHN, M. D., Fulton
 Some Important Diagnostic Points the General Practitioner Should Know About the Nose. G. C. HALL, M. D., Louisville
 Some Important Diagnostic Points the General Practitioner Should Know About the Throat H. G. REYNOLDS, M. D., Paducah
 Forceps Delivery H. E. PRATHER, M. D., Hickman
 The Present Treatment of Puerperal Infection. J. B. LUKINS, M. D., Louisville
 The Indications for and Prognosis of Prostatectomy P. H. STEWART, M. D., Paducah

SPECIAL ORDER AT 12 M.

Oration in Surgery—Then and Now in Surgery... W. L. GAMBILL, M. D., Jenkins

THURSDAY AFTERNOON, OCTOBER 26.

SCIENTIFIC SESSION—2 P. M.

Expectorants: Mode of Action and Symptomatic Indications CARL NORFLEET, M. D., Somerset
 Existing and Needed Health and Medical Legislation in Kentucky J. G. SOUTH, M. D., Frankfort
 Significance of Abdominal Pain in Children. JOHN D. TRAWICK, M. D., Louisville
 What Can the Internist Do For the Bile Tract?.. W. A. JENKINS, M. D., Louisville
 The Indications for Cholecystectomy and Cholecystotomy IRVIN ABELL, M. D., Louisville
 Acute Bacterial Synovitis: Pathology and Treatment J. G. SHERRILL, M. D., Louisville
 Rheumatism from the Modern View Point S. J. MEYERS, M. D., Louisville

Albee Method in Treating Pott's Disease, (with lantern slides) W. B. OWEN, M. D., Louisville

FRIDAY MORNING, OCTOBER 27.

SCIENTIFIC SESSION—9 A. M.

Pruritus: Its Causes and Treatment C. R. LANAHAN, M. D., Louisville

The Home Treatment and Cure of Morphine and Opium Addicts: With a Tabulated Report of Fifty-two Cases. JOHN A. SNOWDEN, M. D., Winchester

Management and Diagnosis of Rectal Cancer (with lantern slides) G. S. HANES, M. D., Louisville

Rectal Conditions from the General Practitioner's View Point C. R. GARR, M. D., Flemingsburg

Excision and Immediate Closure Operation for Anorectal Fistula (with lantern slides) BERNARD ASMAN, M. D., Louisville

Bony Ankylosis of Joints and Their Treatment. FRANK BOYD, M. D., Paducah

Fractures In or Near Joints: Diagnosis and Treatment, (lantern slides) A. D. WILLMOTH, M. D., Louisville

A Plea for the Compulsory Examination of Students' Boarding Houses in our Colleges. V. A. STILLLEY, M. D., Benton

FRIDAY AFTERNOON, OCTOBER 27.

SCIENTIFIC SESSION—2 P. M.

The Detection of Early Pulmonary Tuberculosis, .. EVERETT MORRIS, M. D., Oak Forest, Illinois

Lessons From the Life of a Doctor Incognito: An Appeal to Young Men ... J. W. CRENSHAW, M. D., Cadiz

Advantages of Percy's Electric Cautey in Cancer, R. C. MCCORD, M. D., Lebanon

Then and Now B. P. EARLE, M. D., Dawson

Anterior Poliomyelitis J. N. MCCORMACK, M. D., Bowling Green

CHRISTIAN COUNTY AND HOPKINSVILLE.

April 4th, 1876 the State Medical Association held its 21st annual meeting at Hopkinsville with Dr. John A. Hodge of Henderson, president. At this meeting Dr. L. B. Hickman of Hopkinsville delivered the address of welcome and after the scientific program in which T. S. Bell, Jno. J. Speed, and L. P. Yandell, Jr., all of Louisville, took part, Dr. R. W. Gaines of Hopkinsville was elected president, Dr. J. H. Letcher of Henderson secretary. All these are now dead except Dr. Letcher.

In announcing the meeting, in '76, the *New Era* apologizes because there were no lights on the streets, no public schools and no turnpikes.

This year the Association returns to Hopkinsville for the first time since '76. Should any of those who attended the meeting 40 years ago come to this meeting they will see a remarkable change from the sleepy little village of that time in the busy progressive city of 1916 with a population of 13,000.

Hopkinsville is now the largest market in the dark tobacco district and Christian county produces more tobacco than any county in the State. This county also produces normally 1,000,000 bushels of winter wheat, most of which is made into flour by the mills of Hopkinsville. The U. S. Department of Agriculture has taken Christian county as the model for the whole country for successful co-operation in agricultural pursuits. This year the city and county voted a bond issue

of \$400,000 to build and repair the roads of the county and in a short time this county will have the best roads in the State. Work on the turnpikes is already well advanced.

Besides tobacco factories and flour mills Hopkinsville has the great Mogul Wagon Factory illustrated on another page. The Forbes Manufacturing Company operates the largest lumber business and building plant in this part of the State. The Dalton Brothers Brick Company, furnishes brick to a large section of Western Kentucky and stave and barrel factories and handle factories and others furnish the pay rolls to keep money circulating through the banks of the city and county.

Hopkinsville and Christian county are well supplied with excellent physicians and the county society is in a flourishing condition as is witnessed by the annual report. The profession is fortunate in having the Jennie Stuart Hospital located in Hopkinsville. This is the best equipped general hospital in any of the smaller cities of the State and was built by Dr. E. S. Stuart as a memorial to his wife. The Western State Hospital for the Insane is located at Hopkinsville and Dr. Fred Larue the new superintendent is meeting with success at the beginning of his administration and bids fair to make one of the most efficient superintendents in the State. Dr. Larue is particularly anxious that every physician who comes to Hopkinsville arrange to go through the State Hospital and see the great improvement in the care of our helpless insane.

Hopkinsville has excellent hotel facilities and can accommodate all visitors. It will save confusion, however, if those who intend to come to the meeting will notify Dr. F. P. Thomas, the chairman of the hotel committee and secure rooms in advance.

The city is easy of access having three railroads, the Louisville & Nashville, the Illinois Central and the Tennessee Central.

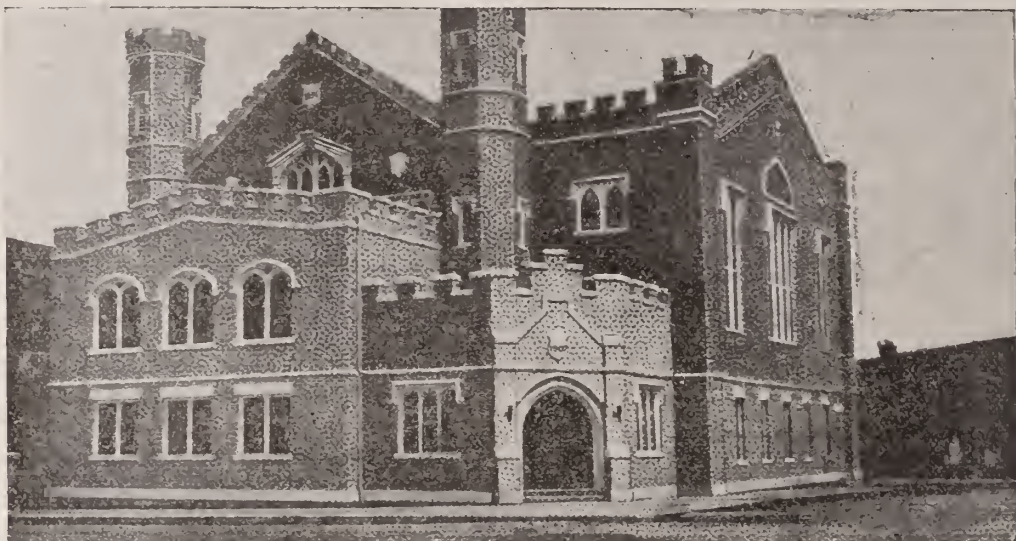
Those who attend the meeting will be assured of a cordial welcome by all the citizens and pleasant recreation and entertainment will be provided by the profession and people of Hopkinsville.

On Thursday night, October 26, the visiting doctors and their wives will be the guest of the Christian County Medical Society at the tabernacle to see the photo play, "Ramona," after which there will be a reception and dance at Hotel Latham.

On Thursday afternoon there will be a reception to the visiting ladies followed by an automobile ride.

R. L. WOODARD,

Chairman Committee on Arrangements.



The Christian Church where the Scientific Meeting House of Delegates, Registration Booth and Scientific and Commercial Exhibit will be held.



Hotel Hatham—Hopkinsville's Handsome Hostelry

MINUTES OF PROCEEDINGS TWENTY-
FIRST ANNUAL SESSION, HELD
AT HOPKINSVILLE, APRIL,
1876.

FIRST DAY—MORNING SESSION.

The Kentucky State Medical Society met in the Court House at Hopkinsville, Christian County, Tuesday, April 4th at 10:30 A. M., with the President, Dr. J. A. Hodge, of Henderson, in the Chair.

The Convention was called to order at 11 A. M., by the Chairman of the Committee of Arrangements, Dr. L. B. Hickman, when the Rev. Dr. G. B. Perry, of the Episcopal church, addressed the Throne of Grace, asking the blessings of Almighty God on the objects for which the Society had convened. At the conclusion of Dr. Perry's prayer, Dr. Hickman delivered the following most cordial address of welcome to the assembled delegates:

Gentlemen of the Kentucky State Medical Society:

There may be, and often are, periods in our lives when we are called to do a work but briefly anticipated, and but little versed in, and yet, to accomplish it, gives us personal pleasure and satisfaction. Such is the service allotted to me at this time. It is to welcome you, gentlemen of the Medical Staff of the State of Kentucky, to our city as our guests, during your present stay among us, for prosecuting your professional researches and discussions in medical science, as well as in its varied and various outgrowths in its remedial appliances, with the execution of such other business as is practicable and as circumstances may require. Much of our professional knowledge is necessarily derived from books, but still more from the wide scope and intelligent use of personal experience in our calling, which, in its duties and splendid attainments is second to no other. Such a body of experts can not meet for the exchange of thought and knowledge proposing the mutual aid of each other, and be likely to fail in the object. As such an Assembly we hail you, brethren, to-day.

We deem your presence and efforts a benefit and honor, and as the guardians of health and life to the public, we are happy to greet you to our home hospitalities—as individuals, to our city as a place convenient for prosecuting your noble designs, and as where, we trust, you will find a welcome as generous as it is sincere.

May our Society flourish in number and talent; and when its veterans shall have finished its course and passed away, may the succeeding branches not only fill the vacancies, but greatly advance upon their present

advantage, perpetuating the fame of our ancient and noble profession. Brothers, therefore, one and all in the name of your brethren of the Christian County Medical Society, I now greet you and bid you a fraternal welcome.

In their name I feel I can say, brothers all, enter our tents and share with us our bread and water; though of silver and gold we have none, yet, as such as we have, we cheerfully give unto you.

Our homes are your homes; may you find them pleasant and agreeable. Accept them and use them as freely as your own.

The following members answered to their names during the meeting: Drs. O. B. Withers, Parkersville; C. H. Todd, Owensboro; L. S. McMurtry, Danville; L. A. Archibald, O. L. Drake, Slaughter'sville; R. M. King, J. W. Pritchett, Madisonville; W. M. Hanna, John L. Cook, James H. Letcher, Henderson; J. A. Carr, H. F. McNary, Princeton; J. L. Dismukes, Mayfield; S. W. Luten, Cayce's Station; J. P. Thomas, Pembroke; A. D. Price, Harrisburg; J. G. Brooks, Reuben Saunders, J. W. Singleton, Paducah; L. P. Yandell, Sr., L. P. Yandell, Jr., J. M. Keller, J. A. Oetzelony, C. S. French, John J. Speed, W. H. Long, John A. Larrabee, R. O. Cowling, J. M. Bobine, F. C. Wilson, M. F. Coomes, C. W. Kelly, Turner Anderson, Willoughby Walling, E. R. Palmer, Louisville; R. W. Gaines, L. B. Hickman, W. G. Wheeler, R. M. Farleigh, J. M. Dennis, Oscar Newland, Hopkinsville; H. Brown, Houstonville; J. A. Hodge, Henderson. The President announced the Committee on Credentials as follows:

Dr. J. P. Thomas, of Christian county, Chairman; J. A. Larrabee, of Louisville; R. W. Gaines, of Hopkinsville; O. B. Withers of Lyon county, and J. G. Brooks, of Paducah.

The names of Drs. J. B. Marvin, W. B. Neary, W. M. Griffiths, R. N. Taylor, Isaac Keller, S. Brzozowski, L. S. Oppenheimer, of Louisville, L. G. Alexander, Bowling Green; C. T. Ratcliff, James Wheeler, W. M. Fuqua, L. J. Harris, G. W. Williams, Hopkinsville; J. H. Woolsey, Bainbridge; J. B. Cullom, Canton; J. W. Crenshaw, Cadiz; J. E. Morris, Fulton Station; F. M. Usher, Crutchfield; John A. Whitlock, Newstead; W. M. Wilson, C. H. Royster, Paducah; J. M. Metcalf, Garrettsburg; J. O. McReynolds, W. B. Jefferson, E. R. Russell, I. N. Bass, Trenton; A. A. Roland, — — Linebaugh, Guthrie; J. L. Dulen, Garrettsburg; F. M. Allen, Montgomery, were presented for membership, approved by Committee of Credentials and subsequently elected.

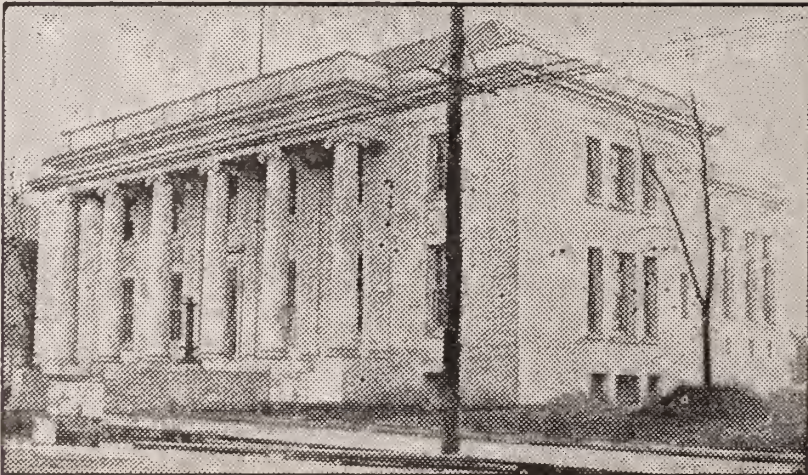
Dr. L. P. Yandell, Sr., offered the following resolutions, which were unanimously adopted:

Resolved, That in the death of Dr. Lewis



LUCIAN H. DAVIS

President of the Hopkinsville Business Men's Association, prominent in business and politics.



U. S. POSTOFFICE

Rogers which occurred at his residence in Louisville, on the 13th day of June, 1875, this Society has lost one of its most distinguished and honored members and the medical profession of Kentucky one of its great lights and ornaments.

Resolved, That in the high moral qualifications of Dr. Rogers, his love of truth, his nice sense of honor, his courtesy and his kindness—united to his great attainments and his skill in medicine, we have a character in every way entitled to the regard of men, and his memory will long remain with us as a physician who faithfully discharged his duty to his patients, to society and to his profession.

Resolved, That the Recording Secretary be directed to transmit a copy of these resolutions to the family of Dr. Rogers.

Dr. J. M. Keller moved that Dr. L. S. McMurtry, of Louisville, be appointed chairman of the committee to draft suitable resolutions on the death of John D. Jackson of Danville, late Vice President of the American Medical Association and a member of the society. Adopted. Dr. R. O. Cowling of Louisville, and Dr. James H. Letcher of Henderson were chosen as committee men by Dr. L. S. McMurtry.

Dr. W. H. Long moved that a memorial page of each be set aside in the transactions to the memory of Drs. Lewis Rogers and John D. Jackson. Motion unanimously adopted.

Dr. L. P. Yandell, Sr., read a report from the Louisville Academy of Medicine, detailing the work of that body for the past year. Referred to the Committee of Publication. The Recording Secretary made his report of the financial condition of the Society, and presented his account. Report received, and his account ordered to be paid.

The Treasurer, Dr. John A. Larrabee, of Louisville, made a brief report on finances, showing the amount of money received, disbursed and on hand; which was satisfactory to the membership. Report received, Dr. L. P. Yandell, Sr., made his report as chairman of the Publishing Committee and the financial circumstances that guided the committee in making up the volume of "Transactions for 1875." Adopted.

Dr. L. B. Hickman, the chairman of the Committee of Arrangements, delivered an invitation from Rust Female College to visit that institution in the afternoon. Invitation accepted, and the hour of 5 p. m. was fixed upon for compliance with the request of Professor Rust.

Adjourned until 2 p. m.

AFTERNOON SESSION.

The Convention was called to order at 2:30 p. m., with Dr. Hodge in the chair, when the

credentials of Dr. John W. Compton, of the Drake Academy of Medicine, Evansville, Indiana, were presented. Dr. Compton was invited to a seat on the stage.

The Secretary read a letter from Dr. P. H. Bailhaeche, of Washington City, chairman of the Committee on Diseases of Military Life, stating that his report was completed and had been forwarded. Dr. C. H. Todd, of Owensboro, read a report on Medical Ethics, which was discussed by Dr. L. P. Yandell, Sr., Dr. W. H. Long and others, and referred to the Committee on Publication. Dr. Larrabee, of Louisville, read a lengthy report on Scarlet Fever and Malarial Epidemics. Referred to Committee on Publication.

The following dispatch was announced by the Secretary in answer to one forwarded in the forenoon:

Marshall, Texas, April 4th, 1876.

To the Medical Association of Kentucky:

The Texas State Medical Association has your kind greeting. Accept our sincere thanks and greetings in return.

W. H. BROWN, President.

W. A. EAST, Secretary.

Dr. F. C. Wilson, of Louisville, as chairman of the Committee on Transfusion read his report, and with apparatus explained the method used by him in the cases in which he had performed the operation. On motion and second, Dr. Wilson's paper was made the subject for discussion at 11 a. m. Wednesday.

The President named the following members as the Committee on Nominations, viz.: Drs. J. M. Bodine, C. W. Kelly, J. A. Oeterlony, L. S. McMurtry, C. N. Todd, A. A. Rowland, J. S. Cook, L. P. Wandell, Sr., J. A. Carr, R. Saunders, J. A. Whitlock, James Wheeler, A. D. Price, J. P. Cullom, L. G. Alexander, J. E. Morris, O. L. Drake, J. L. Dismukes, R. N. King and J. M. Denis.

Dr. A. D. Price, of Harrodsburg, introduced preamble and resolutions as follows which passed first reading:

Whereas, An appreciable diminution in attendance and appreciation of interest has been observed in this Society; and

Whereas, It is desirable that the profession of Kentucky have a home, with facilities for a library, etc.; therefore, be it

Resolved, That Section 1, Article VII of the Constitution be so amended as to strike out all after the word "April" and insert "at Louisville, unless otherwise fixed for special reasons by a two-thirds vote.

Resolved, That this Society discourages expensive entertainments to the Society as such.

After which the Society adjourned to visit the Rust Female College, to meet in Mozart Hall at night to hear Dr. Hodges' address,

and a lecture from Dr. J. J. Speed of Louisville.

At 8 p. m. the society met a large attendance of ladies and gentlemen, citizens of Hopkinsville and elsewhere in Mozart Hall, according to published appointment. The vice



DR. F. H. BASSETT
Mayor of Hopkinsville

president being temporarily absent Dr. Hickman presided. The Secretary (by request) made a motion that Dr. L. P. Yandell, Sr., being the oldest physician and medical teacher present be invited to occupy a seat on the stage beside the President. The motion, being duly seconded, was adopted, and Dr. Yandell at once complied with the request. Dr. Hodge's address was received with the most respectful attention (for which he is grateful), and Dr. J. J. Speed's essay on "Nature in Disease" met a similar reception from a most intelligent and refined audience.

Adjourned, to meet in the Court House, at 9 a. m., Wednesday morning.

SECOND DAY—MORNING SESSION.

The Society was called to order at 9:30 a. m., Dr. Hodge in the chair.

The Secretary communicated the request of Dr. E. S. Galliard, Editor of the *Richmond and Louisville Medical and Surgical Journal*, that the proceedings of this meeting may be published in this monthly. Dr. R. O. Cowling, one of the editors of the *Louisville Medical News* and Dr. L. P. Yandell, Jr., as a representative of the *American Practitioner*, made a similar request for their respective journals. Consent unanimously granted, af-

ter the minutes have been submitted to the approval of the Committee of Publication.

Following this action of the Convention in reference to publishing our proceedings, Dr. John A. Larrabee, of Louisville, arose, and said:

Mr. President and Gentlemen:

During the sojourn of the Kentucky State Medical Society in this place, our professional brother, Dr. James Rodman, has been called upon to sustain a terrible affliction in the loss of a lovely and darling child: Therefore, be it

Resolved, That we tender to Dr. Rodman our most heartfelt sympathy in this sudden and unequalled affliction.

The motion was adopted unanimously.

A resolution was then offered to allow the Recording Secretary fifty dollars as compensation for his services for the past year.



PROF. J. W. MARION
Superintendent City Schools

Quite a discussion followed as to the amount that should be allowed said officer. The secretary expressed his unwillingness to receive anything for his work, unless his predecessor, Dr. Larrabee, should be permitted to retain the money now in his hands as justly his, in part pay for his faithful and efficient services as

our former Secretary. This Dr. Larrabee refused to accept, even as an honorarium. The motion to allow the fifty dollars introduced by Dr. R. O. Cowling, and strongly advocated by Drs. J. M. Keller and L. P. Yandell, Jr., was adopted without dissent.

The Society voted that the Recording Secretary should be allowed fifty dollars annually for his services. Dr. L. P. Yandell, Jr., offered the following resolutions which met the unanimous approval of the members present.

Resolved, That every member of this Society being in arrears shall, under no circumstances again be permitted to participate in its discussions or to be present at its meetings until all is moneys by him due shall be paid up.

Resolved, That the Secretary be instructed to inform all delinquent members of this resolution, and that they be given until the next meeting to liquidate their indebtedness.

(Let all good members of the State Society respond promptly and willingly to the letter and spirit of the foregoing resolutions, and we can make our beloved Association one of the best societies in the United States.—Rec. Sec.)

Dr. J. M. Keller offered the following:

Resolved, That a committee of three be appointed to prepare a revision of the Constitution and By-Laws, to be submitted at the next meeting. The President appointed Drs. J. M. Keller, E. S. Galliard, R. H. Gale and J. H. Letcher members of said committee, to report at next meeting, April 3rd, 1877.

The Committee on Nominations reported the following officers for the ensuing year: For President, Dr. R. W. Gaines, Hopkinsville; Senior Vice President, Dr. C. H. Todd, Owensboro; Junior Vice President, Dr. L. S. McMurtry, Danville; Recording Secretary, Dr. J. H. Letcher, Henderson; Corresponding Secretary, Dr. A. D. Price, Harrodsburg; Treasurer, Dr. J. H. Larrabee, Louisville; Librarian, Dr. John J. Speed, Louisville, Committee of Publication, Dr. J. W. Thompson, Dr. D. A. Maxwell, Dr. J. G. Brooks, Paducah.

Dr. L. P. Yandell, chairman of the Committee on Medical Literature read a report on the lives and writings of Drs. Caldwell and Drake, and said that his work extending through a period of several years, was now completed. The papers were referred to the Committee on Publication.

A resolution was offered by Dr. J. P. Culom of Caneton to the effect that hereafter the Nominating Committee of this Society shall not be obliged to conform to the custom of selecting the President from the neighborhood in which the Society is then meeting. Adopted.

Dr. L. P. Yandell offered a resolution sustaining the action of the American Medical Association in its efforts to increase the standard of medical education.

The Editor of the *Hopkinsville New Era* asked permission to publish the address of the President, which after some discussion on the propriety of furnishing to secular papers medical addresses, was granted.

The President called the hour for special business (the discussion of Dr. Wilson's report on Transfusion).

Dr. R. O. Cowling of Louisville opened the discussion and reported four cases of the operation performed by himself. All four cases terminated fatally; one during the operation the other three soon after. He believes that death in the immediate fatal case was due to over-stimulation of the heart. Dr. Keller followed and in view of the facts as reported doubted the advisability of the operation. Dr. Larrabee said that transfusion had been recommended in phthisis but doubted the advisability of the operation in this disease and gave his reasons therefor.

Dr. Wilson reported two cases transfused by himself, death resulting in both. Dr. Oeterlony made a few remarks on the mode of death in fatal cases of transfusion, and doubted if over-stimulation of the heart had been proved by Dr. Cowling. Dr. L. P. Yandell, Jr., said he believed that the operation had been performed too late in all the cases reported.

Dr. L. P. Yandell, Jr., of Louisville, read a report on Dermatology presenting the theory that all chronic cases of skin affection were due primarily to a stumous diathesis, and acute skin diseases to malaria, excluding exanthematous diseases. Referred to the Committee on Publication.

Dr. L. S. McMurtry, of Danville, moved that an Executive Committee be appointed consisting of five members to be known as the McDowell Monument Committee, whose duty it shall be to collect the money already subscribed for that purpose and secure such donations as possible, and to erect some monument over the remains of Ephriam McDowell the "Father of Ovariectomy" at Danville, Kentucky.

The motion having been seconded, Drs. McMurtry and Keller proceeded in a brief manner, to discuss the importance of honoring the memory of Dr. McDowell.

Drs. J. H. Letcher, J. L. Cook and J. A. Oeterlony earnestly supported the measure embraced in the resolution.

Something was said about securing an appropriation from our State Legislature for the purpose indicated, when Dr. W. H. Long



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HOPKINSVILLE AND CHRISTIAN COUNTY HIGH SCHOOL

remarked that he would consider it a disgrace to Kentucky doctors to permit the legislature to build a monument at public expense in honor of the immortal McDowell.

Dr. L. P. Yandell, Jr., approved the idea advanced by Dr. Cook that it was the high moral duty of governments to honor the greatness, virtues and excellencies of medical heroes. He said that in all civilized trans-Atlantic countries, distinguished physicians and surgeons, as well as generals and the clergy, were honored, and often knighted as men celebrated in other walks and duties of life, and the reason why proud honors were not heaped upon American physicians who have adorned the annals of their profession and rendered themselves immortal in the ranks of their brethren of medicine, is simply from the fact that the doctors of America do not force the public and government to acknowledge their merits in a substantial and honorable manner.

Dr. Yandell said: "The Legislature should first be appealed to, or rather, have its attention called to its duty to one of Kentucky's most distinguished dead, whose life had been devoted to the service of his fellow men; one of the illustrious men of his day and one whose usefulness had lived after him a perennial tree of good fruit. Our legislators vote money for the erection of monuments to our statesmen and soldiers, and why not to physicians and surgeons? Our State, along with the rest of the country is behind all civilized nations in its appreciation of medical worth, and while the doctors of America stand fully abreast in skill, knowledge and wisdom, with those of any other land, and by their brethren abroad are recognized as peers; at home they are not deservedly appreciated. Neither in the army, or in the navy or in civil life, do medical men in America command the consideration worthy of their merits. This is largely our own fault and partly that of our predecessors. We have not demanded our rights. We have not fought for our rights, and the rights of people or classes do not come to them save as the result of effort. Surely we of the healing art may justly claim equal moral worth, and mental ability, and professional acquirement, and exalted usefulness with any other guild of our fellow citizens. Among savages we find the medicine man a person of power; and where human civilization is most exalted, in Great Britain and on the continent of Europe, we find doctors the companions of Kings and the possessors of titles and high honors. Why should not a Kentucky Legislature take the lead, and honor itself by honoring her great son, McDowell, a doctor who by his deeds and discoveries has far more benefited his fellow-beings than any one of the statesmen or soldiers whose lives have lent lustre to the fame of our beloved State. This is an

age of intellectual force. The period when physical prowess was honored highest is past. He who labors most to profit the human race is he who deserves most homage from his kind. Therefore, I hold it our duty first to bring this matter of the McDowell Monument to the attention of the legislature, and should they prove blind to their duty, or incapable of comprehending the justice of the great dead's claim, then should we put our shoulders to the work and shame our law-givers by doing what devolved upon them."

The motion of Dr. McMurtry was unanimously adopted, and the chair appointed Drs. L. S. McMurtry, of Danville, J. S. Leteher of Henderson, Turner Anderson of Louisville, H. M. Skillman of Lexington and J. W. Thompson of Paducah, as members of the McDowell Monument Committee.

Dr. J. L. Dismukes of Mayfield offered a report on an interesting case of cranial surgery, recently treated by himself and Dr. J. W. Thompson. Referred to the Committee on Publication.

Dr. Reuben Saunders of Paducah presented the Society with a paper on the Advantages of Hypodermic Medication. Referred to Committee on Publication. Adjourned until 1 p. m.

AFTERNOON SESSION.

The Convention was called to order at 1:30 p. m., Dr. Hodge in the chair, when Dr. Newland read the following dispatch:

Nashville, Tenn., April 4th, 1876.

To the Kentucky Medical Society:

The Tennessee Medical Society sends greetings, and wishes you God speed.

J. D. PLUNKET.

Dr. J. A. Oesterlony of Louisville, read a valuable paper on Syphilitic Diseases of the Skin. Referred to Publishing Committee.

Dr. M. F. Coomes, of Louisville, read a paper on Chronic Suppuration of the Middle Ear. Referred to Publishing Committee.

Dr. Compton, of Indiana, read a paper on the Use and Effects of the Sulphate of Cinchonidia. Referred.

Dr. McMurtry asked permission to write the resolutions on the death of Dr. John D. Jackson and send the same to the Committee on Publication. Granted.

The resolutions making Louisville the permanent place of meeting was read the second time, and was defeated.

Dr. L. P. Yandell, Jr., moved that the Society meet at Louisville on the first Tuesday in April, 1877, and proceeded to show that the Kentucky State Medical Society, is an independent concern, and it could go where it pleased and when it pleased. He wanted it



Mogul Wagon Plant—Capacity 12,000 Yearly. Covers Fifteen Acres



at Louisville next year and Louisville invites it to come. Adopted.

A resolution was offered that the Society in the future discourage the expensive entertainments usually given at the places where it meets. Carried.

A motion was made and carried to appoint a Committee on Necrology.

On motion and appropriate remarks by Dr. Larrabee, a Committee on Memorial in honor of the late Dr. Joseph Smith, deceased, late Treasurer of the Society, was appointed by the President with Dr. L. B. Todd, of Lexington, as chairman, to report at our next meeting.

MISCELLANEOUS.

On call of Standing Committee, Dr. J. L. Cook of Henderson, was requested to read his report on pharmacy. Dr. Cook requested further time on the Committee to which he was appointed, and proceeded to speak on pneumonia as a practical question, worthy of the deepest and most philosophic study of the profession.

Dr. J. O. McReynolds of Elkton, in a few remarks recommended the persulphate of iron in post-partum pains. He accidentally discovered the excellence of this article in after pains, in using it to arrest post partum hemorrhage.

Dr. L. M. Lovelace, of Milburn, through the Secretary, presented the Society with a lengthy paper on Dysentery. Referred to Committee on Publication.

Dr. A. Given of Louisville, also sent a report on *Veratrum Viride* in Pneumonia. Referred to Committee on Publication.

Dr. J. P. Cullom, of Canton, contributed the report of an interesting case in surgery. Referred to Publishing Committee.

Dr. J. A. Larrabee, presented the society with a practical essay on Ergot in Diseases of Children, which was appropriately referred.

Dr. L. P. Yandell, Jr., moved to abolish the Committee on Botany. Motion adopted.

A standing Committee on *Materia Medica*, was ordered by the Society in lieu of the Committee on Botany.

The credentials of Dr. L. S. McMurtry as a delegate from Boyle County Medical Society, of Drs. John C. Whitlock and E. R. Cook of the Christian County Medical Society; of Dr. J. P. Cullom, of the Trigg County Medical Society; of Drs. M. F. Coomes and W. H. Long from the Louisville Academy of Medicine, were presented and received.

Dr. J. P. Thomas offered the following preamble and resolutions:

Whereas, The recent report of Registration, wherein the registration of marriages, births and deaths, and especially the classification

and nosological arrangement of diseases fully demonstrates the inefficiency of the law as passed by the legislature preceding the one which has just adjourned; and,

Whereas, It is plainly evident to every medical mind that its provisions as carried out is simply a farce, and fully illustrates the folly of that body in refusing to employ in the registration act one of the main features of the bill as seconded by this society, viz.: that of placing the Registration Bureau under medical supervision, with a proper salary attached to said office, sufficient at least to justify the labors of an officer possessing general scientific knowledge as well as the requisite medical skill; but on the contrary, as is the case as the law now stands, placing the difficult duties of registrar in the hands of the Auditor of the State, who is necessarily ignorant of medical knowledge; therefore be it

Resolved by this Society in Convention assembled,

That, as a body, we memorialize the next Legislature of Kentucky to repeal this more than useless Act, and enact in its stead a stringent and compulsory registration law, under the supervision of a medical man as registrar, possessing the necessary qualifications to fill said office with sufficient pay.

Resolved, That this Society memorialize the same Legislature, praying for the establishment of a properly organized State Board of Health, with district and county boards as auxiliaries.

Resolved, That this Society recommends to said honorable body the amendment to the law establishing Examining Boards, by changing the appointing power from our Chief Executive to a Committee of physicians appointed by this Society and requiring each member of said board to submit to an examination before such committee as to his qualifications for such membership.

The preamble and resolutions were adopted without expression of dissent.

The Secretary read a few extracts from Dr. S. A. Foss's letter to himself and Dr. George Beeler, of Clinton, making some pointed and wholesome suggestions on the practical operations of the Registration Law of Kentucky, which were very acceptable to members present.

Dr. C. H. Todd, of Owensboro, offered the following:

Resolved, That the thanks of this Association be tendered to the President, Dr. J. A. Hodge, for the able, impartial and genial manner in which he has presided over the deliberations of this body.

Put to vote by the Secretary and unanimously adopted.

The following resolution was offered by a member present:

Resolved that as Secretary of the Kentucky State Medical Society the service of Dr. J. W. Singleton for the highly satisfactory manner in which he has discharged the duties of the office.

Adopted without expression of dissent.

the American Medical Association to be held at Philadelphia, June 6th, 1876.

P. H. Bailhache, T. J. Griffith, J. A. Larabee, J. M. Bodine, L. P. Yandell, Jr., J. M. Keller, F. C. Wilson, J. A. Oeterlony, Louisville; C. H. Todd, Owensboro; J. P. Letcher, Lexington; R. M. King, Madisonville; J. A. Carr, Princeton; J. P. Thomas, Pembroke;



DR. E. S. SUART

Who Built the Jennie Stuart Memorial Hospital in Memory of His Wife.
This Institution is One of the Most Complete Outside of the Large
Cities in This State.

The following resolution was offered by Dr. L. S. McMurtry of Danville:

Resolved, That the thanks of the Kentucky State Medical Society are due and are hereby tendered to the Christian County Medical Society and citizens of Hopkinsville for hospitalities and courtesies during the present session.

Passed unanimously.

The following delegates were appointed to

George Beeler, Clinton; J. W. Singleton, Paducah. J. W. Thompson, Paducah; J. M. Montmollin, Ashland; Chas. Mann, Nicholasville; W. M. Hanna, Ben Letcher, J. A. Hodge, Henderson; W. M. Fuqua, L. B. Hickman, Hopkinsville; J. O. McReynolds, J. N. Bass, Elkton; J. N. Metcalf, Garrettsburg; O. L. Drake, Slaughter'sville; L. B. Todd, H. M. Skilman, Lexington.

The following is the list of delegates ap-

pointed by the President to the International Medical Congress, to be held at Philadelphia, November 1876.

John Goodman, J. A. Oeterlony, E. S. Gailard, J. A. Larrabee, R. O. Cowling, L. P. Yandell, Sr., D. S. Reynolds, D. W. Yandell, Louisville; J. H. Letcher, Henderson; J. Hale Owensboro; Geo. T. Erwin, Danville; J. M. Montmollin, Ashland.

The following gentlemen were appointed chairmen of special committees:

Committee on Philosophy of Medicine, Dr. James Wheeler, Hopkinsville.

Committee on Syphilis, Dr. Irvin Keller, Louisville.

Committee on Surgical Diseases of Military Life, Dr. P. H. Bailhache, U. S. M. H. S.

Committee on Ophthalmology, Dr. D. S. Reynolds, Louisville.

Committee on Glaucoma, Dr. P. T. Johnson, Owensboro.

Committee on Hysteria, Dr. J. L. Dismukes, Mayfield.

Committee on Pyemia, Dr. E. R. Palmer, Louisville.

Committee on Malarial Complications, Dr. J. W. Singleton, Paducah.

Committee on U. S. Marine Hospital, Dr. T. J. Griffiths, Louisville.

Committee on Necrology, Dr. J. B. Marvin, Louisville.

Committee on Diseases of Children, Dr. J. A. Larrabee, Louisville.

Committee on Sprains, Dr. R. O. Cowling, Louisville.

Committee on Otology, Dr. M. F. Coomes, Louisville.

Committee on Physiological and Pathological Changes in Blood Corpuscles, Dr. F. C. Wilson, Louisville.

Committee on Gynecology, Dr. W. H. Wathen, Louisville.

Committee on New Remedies, Dr. J. A. Oeterlony, Louisville.

Committee on Aspirator; Its Uses, Dr. D. W. Yandell, Louisville.

Committee on Diseases of the Genito-urinary Organs, Dr. R. T. Logan, Shelbyville.

Committee on Diseases of the Throat, Dr. R. C. Brandies, Louisville.

The following standing committees were appointed:

Committee on Vital Statistics, Dr. D. N. Porter, Eminence.

Committee on Epidemics, Dr. L. S. McMurry, Danville.

Committee on Obstetrics, Dr. W. H. Long, Louisville.

Committee on Improvement in Surgery, Dr. W. O. Roberts, Louisville.

Committee on Finance, Dr. H. L. McNary, Princeton.

Committee on Improvement in Practice of Medicine, Dr. Turner Anderson, Louisville.

Committee on Hygiene, Dr. W. H. Sanders, Smithland.

Committee on Medical Ethics, Dr. R. M. Farleigh, Hopkinsville.

Committee on Materia Medica, Dr. L. P. Yandell, Jr., Louisville.

Committee on Necrology, Dr. L. B. Todd, Lexington.

Drs. L. P. Yandell, Jr., J. A. Oeterlony, E. D. Force, W. H. Long, and Turner Anderson were appointed a Committee on Arrangements.

Dr. H. F. McNary, of Princeton, and Dr. L. P. Yandell, Jr., of Louisville, were appointed a Committee to conduct the President-Elect, Dr. R. W. Gaines, to the chair, who said:

Gentlemen of the State Medical Society:

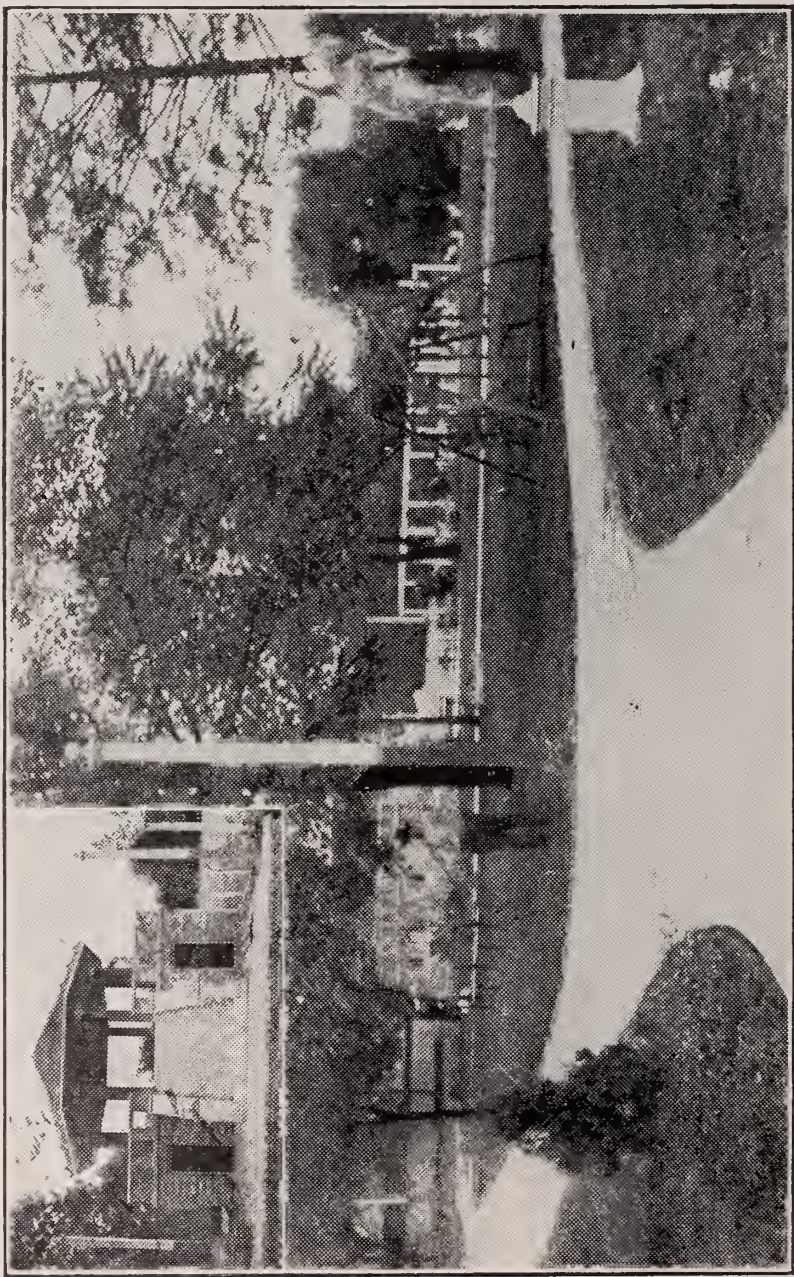
I trust, gentlemen, that I shall be excused from making anything like a formal speech, not having had sufficient time for premeditation. Nevertheless, I can not refrain from responding to the compliment paid me by this Society, a compliment attributing to me higher merit than I have ever thought of attaining to; a compliment the more appreciated by me, in as much as it was unexpected. But little skilled in parliamentary precedents, in accepting the duties your partiality has this day assigned me, I shall have occasion to throw myself upon your patience, your forbearance and your assistance. With these aids gentlemen, I shall hope to discharge the duties of the office with credit to myself and the Society to which we belong. I thank you gentlemen, most ardently for the honor conferred.

When Dr. Gaines has concluded his remarks Dr. Singleton appointed himself a committee of one to present a beautiful and fragrant bouquet to his handsome and distinguished successor, Dr. J. H. Letcher, of Henderson, in fraternal benediction, when the Society adjourned at 6:30 p. m., to meet in the city of Louisville, on the first Tuesday in April, 1877.

J. A. HODGE, President.

J. W. SINGLETON, Recording Secretary.

Initial Fever with Tuberculosis.—Kleinschmidt thinks that the assumption of an initial fever in tuberculosis will have to be deferred until more data have been accumulated. He reports the case of an infant nursed by the mother in the last stage of consumption. After her death the child seemed to be thriving and its temperature was constantly normal until the fifty-first day when the Pirquet test elicited a positive reaction. The temperature persisted normal for another two weeks, but then rose and other symptoms of generalized tuberculosis rapidly followed, fatal at the age of 3 months.



Virginia Park—One of the Most Beautiful Spots in Kentucky

THE COMMERCIAL EXHIBIT.

THE CHAS. H. PHILLIPS CHEMICAL COMPANY,
LONDON AND NEW YORK,

Space No. 1.

The Chas. H. Phillips Chemical Co., London and New York, as usual, will display and sample:

Phillips' Emulsion of Cod Liver Oil. Fine as the fat in chyle—ready for assimilation.

Phillips' Digestible Cocoa. A nourishing, easily digested liquid food. Substitute for plain milk where latter is not liked or is tired of.

MELLIN'S FOOD COMPANY, OF BOSTON,

Space No. 2.

Physicians seriously interested in the problems of infant feeding will have ample opportunity to make inquiries regarding the manufacture and composition of Mellin's Food and the application of this product in directing the nutrition of the normal, healthy infant as well as the baby with a disturbed digestion.

THE PHYSICIANS' SPECIALTY CO., LEESBURG,
VIRGINIA,

Space No. 3.

The Physicians' Specialty Company will exhibit the plaster and electric cabinet. This cabinet has a tankless compressed air outfit, nebulizing outfit, and electric heater for either fluids or air, a vibrator with the simultaneous application of heat and vibration, set of vacuum cups, high frequency currents, Cautery Transformer, Diagnostic Light Controller, Sinusoidal Current with X-ray and other currents.

Space No. 4.

REED & CARNRICK, JERSEY CITY,

Space No. 7.

The exhibit of Reed & Carnrick will be purely of a scientific nature, showing the different stages in the manufacture of their various physiological and glandular products. Each gland is shown separately beginning with the maceration of the fresh glands as they come from the selected animal, down to the final stages where, as fine powder, they enter into the formation of the particular products desired. The glands exhibited in their various stages of preparations are in part the pancreatic, peptic, intestinal, thyroid, thymus, renal, splenic and salivary glands. Tests for some of the special internal enzymes will be made, and the microscope will be used to show the microscopical appearance of the various nucleo-enzymes as they appear in powder form.

HORLICK'S MALTED MILK COMPANY, RACINE,
WISCONSIN,

Space No. 8.

Will display "Horlick's" the Original Malted Milk, together with Horlick's Food and Horlick's Diastoid. They will also serve the delicious Horlick's Malted Milk Ice Cream. Physicians appreciate that "Horlick" is the originator of Malted Milk, and that the name insures quality and uniformity, and commend it highly where a safe, palatable and easily digested food is indicated.

A. S. ALOE COMPANY, 513 OLIVE STREET,
ST. LOUIS, MISSOURI.

This Company has a full line of surgical instruments, physicians' supplies, hospital furniture, bacteriological apparatus, microscopes, trusses, elastic stockings, abdominal supporters, orthopedic apparatus, etc., and we feel sure their exhibit at the Hopkinsville meeting will be worth while.

LOWENTHAL & HOSICK, 115 EAST GRAY
STREET, LOUISVILLE,

Space No. 10.

Will exhibit an Invalid's Wheel Chair
"Made from any Rocker in Two Minutes."

D. APPLETON & COMPANY, NEW YORK,

The Appletons, publishers of authoritative books on medicine and surgery for over fifty years, are featuring in their exhibit their latest publication, a new five-volume work, "Operative Therapeutics," edited by Alexander Bryan Johnson, as well as several distinctive books on Diseases of the Kidneys, Ureters and Bladder, Diseases of the Stomach, Borderline Diseases, Anemia and Resuscitation, Anesthesia, Occupational Diseases, Diseases of Women, Pain, etc., by such men as Doctors Howard A. Kelley, Charles G. Stockton, J. N. Hall, George W. Crile, James T. Gwathmey, W. Gilman Thompson, Charles T. Reed, Richard J. Behan and other notable physicians who are on the Appleton list.

THE KENTUCKY CARLSBAD SPRINGS HOTEL
COMPANY,

Space No. 19.

Analysis Carlsbad Springs Water—Made by W. Simonson, Chemist, Cincinnati, Ohio. Natural, Minerals, Grains per U. S. Gallon. Total dissolved solids, 134.07; Calcium carbonate, 10.40; Magnesium carbonate, 6.09; Sodium Sulphate anhydrous, 14.07; Sodium bicarbonate, 4.30; Sodium hydrosulphide, 5.17; Potassium sulphate, 5.88; Ferrous sulphide, .73; Strontium carbonate, .50; Lithium carbonate, .30; Sodium bromide, .07; Sodium chloride, 183.23.

THEO. TAFEL, LOUISVILLE.

Space No. 20.

Among the exhibitors at this year's meeting will be the old reliable Louisville firm of Theo. Tafel, who will make his usual display of Surgical Instruments, also a special display of Electric Incubators, and Bausch & Lomb Microscopes and Centrifuges.

STANDARD OIL COMPANY,

Space No. 23.

Will exhibit Stanolind, Liquid Paraffin (medium heavy) tasteless-colorless-odorless.

VULCAN COIL COMPANY, LOS ANGELES,
CALIFORNIA,

Space No. 29.

For exhibit.

THE EIGHTH ANNUAL REPORT OF
THE MEDICO-LEGAL COMMITTEE.

The following is submitted as the eight annual report of the Medico-Legal Committee:

YEAR	CASES REPORTED	1915 CASES PENDING	1916 CASES PENDING	1916 CASES DISP'D. OF
1909	5	0	0	0
1910	0	0	0	0
1912	13	2	1	2
1911	11	1	1	0
1913	18	1	1	0
1914	18	3	1	2
1915	23	16	8	8
1916	16	0	10	6
	104	23	22	18

INCOME AND EXPENSES.

	INCOME	EXPENSE
1909-1910	\$ 592.00	\$ 428.95
1910-1911	971.00	450.00
1911-1912	942.00	819.15
1912-1913	1,742.00	1,260.40
1913-1914	1,691.00	2,940.30
1914-1915	2,014.00	2,074.80
1914-1915	2,014.00	2,074.80
Total	\$10,055.00	\$10,254.13

LOSSES.

Total losses for eight years\$3,055.00

Four cases have resulted in verdicts against the doctors for the following amounts: \$50.00, \$100.00, \$300.00 and \$2,605.00.

During the past year we have disposed of eighteen cases, one of which was lost. A verdict of \$2605.00 was rendered against the doctor. The verdict of the first trial was \$3,-105.00, a new trial was granted and resulted

in a verdict for \$2605.00 and was affirmed by the Court of Appeals. We were most unfortunate in this case in many ways, a good fight was made but the odds seemed against us. We regret it.

One case previously reported as a verdict for the defendant was reversed by the Court of Appeals and on second trial the verdict was reduced to \$2,000.00. The doctors feel hopeful as to the ultimate outcome.

At the trial of a suit brought in the Federal Court against two doctors, the Court dismissed the charges against one of them and the jury could not agree upon a verdict against the other. The result of the trial convinced the doctors that it will be dropped.

Of the eighteen cases disposed of, six were dropped, seven dismissed in Court, two tried and three compromised or adjusted. It is interesting to note a lessened number of trials and also the number dismissed in Court. However, such dismissals are about as expensive as trial cases, for the fact that all preparations were made for a trial. It is also interesting to note that only sixteen cases were entered for 1916 against twenty-three for 1915. I hope this indicates that fewer cases will be reported in the future.

Altogether the work of the Committee has been more than satisfactory and we feel that the results have fully repaid the efforts of all.

Our advice to every doctor is to join the State Association, pay his dues *regularly the first month of the year.*

Respectfully submitted,
JNO. J. MOREN, Chairman.

Some Vasomotor Reactions of Liver.—It was noted by Edmunds that under the action of epinephrin the liver volume changes are not the same in all animals, even in those of the same species. In the dog the usual effect of the injection of epinephrin is a constriction of the liver which continues during the time that the general blood pressure is reaching its maximum and returning to normal again. In the cat the usual type encountered is an increase in volume dependent on the increase efficiency of the heart. Variations from both types are frequently seen. When the hepatic artery is tied, all the types resolve into one. In this type there is no marked change in volume during the early portion of the curve, but later there is a marked increase. This increase is the result of the backing back of the blood in the vena cava, and it is therefore entirely passive. Injected into the intact animal epinephrin gives no proof of the presence of vasomotor nerves in the portal vein.

ORIGINAL ARTICLES

LESSONS AND OBSERVATIONS OF
THE MEDICO-LEGAL COMMITTEE.

By JNO. J. MOREN, Louisville, Chairman.

Dr. Jno. J. Moren,
City.

Dear Doctor: If this line of thought, which is so admirably covered by your paper, were drilled into the heads of the doctors, the malpractice suits would soon be a thing of the past.

Yours truly,
FRED FORCHT.

After eight years experience with the cases which have been reported to the Medico-Legal Committee, I feel justified in giving you the benefit of those observations and the lessons which this experience has taught those directly interested.

Furthermore, it is the belief that an open discussion of a question that pertains to the welfare of both doctor and patient is appropriate and can do no one harm. Your Committee has done nothing to be ashamed of; but is ashamed of some of the acts of those who have attempted to hound our fellow doctors. Consequently the advice to be given is not mere words; but an opinion formed from experience and are given as a warning to help you to do better work for those who employ you and likewise to expect more respect and compensation for your work.

It is a common opinion that damage suits should be settled out of court. You hear, "No one can tell what a jury is going to do or say." This may be true, but as far as my experience goes, the courts have been very reasonable and we have no grounds for complaint. Cases are often open for trial before they are properly prepared. Over confidence of victory has caused us trouble but results from our own short sightedness must not be blamed to others.

If the people would have more respect for the law that governs the individual relation to the other and stop abusing the privilege of resorting to law for recourse, we would all be far happier and better fixed.

Malpractice suits are governed by Common Law, decision rendered by the higher courts in every state. When read and compared to a pending suit, you are impressed with their variation; but when studied collectively, you will see that the basis of all the decisions depend upon the question of a contract or civil responsibility. Did the doctor fulfill his contract? Was he negligent or careless.

One of the most important facts which we must remember is, that the law holds that

when we begin to treat a patient we imply a contract.

We as physicians are not exempt from the law that holds an individual responsible for his acts. We as physicians have a duty to perform. The people expect it and the law holds us responsible.

Considering the special work of the physician and laws governing the practice of medicine, the law does not expect any more from us than it does from any other individual.

The great lesson for us to learn, is that every time that we are consulted by a patient it becomes our duty to fulfill a contract:

"When a physician undertakes to attend a case he impliedly contracts that he will use that degree of learning and skill for his employer which is ordinarily possessed by others of his profession in localities not dissimilar from that in which he is practicing."

Furthermore:

"Upon consenting to treat a patient, it becomes his duty to use reasonable care and diligence in the exercise of his skill and the application of his learning to accomplish the purpose for which he was employed." (155 N. Y. 201).

The word of an honorable man is as good as his note, he means to comply with his contract. Should not the doctor honor his contract, use every available source of knowledge, think and apply that knowledge with skill and diligence?

Before a carpenter rebuilds a house, a careful inspection is made of the structure. The object is to find out what is to be done. The doctor should examine the structure to be repaired. If no damage is found, search again and again until you can reasonably say, such a condition exists. By such thoroughness we begin to fulfill our contract. In our hurry to see other patients we are prone to make hasty diagnosis and dissatisfied patient.

Dr. Kash recently reported some surgical work in the mountains. This was most interesting to me and shows what can be accomplished when we *think*. I only hope that the doctor thinks as much about all of his cases.

All of us should *think* more about our cases. Do your "best" and I am sure that you will find the law most reasonable.

I wish to call your attention to a very important question, the failure to attend obstetrical cases when called. Recently we had a case reported where the doctor was called out of town, leaving his work in charge of a competent man. An obstetrical call came in and the doctor was engaged in another case and could not leave. A third doctor was called and the case terminated in good condition. The husband now sues the original doctor for damages. This impressed me as a most important question and I sent Mr. Forcht the

following letter which was published in the *London Lancet* some two or three years ago.

THE AGREEMENT TO ATTEND A CONFINEMENT
AND ITS LIABILITY.

Sir: The following are the short facts of a case in which judgment was given against our client, Dr. W. E. Falconer and we submit that they may be given serious importance to your readers and the medical profession generally.

In or about October of last year, a patient called at our client's office and stated that they had anticipated confinement the following January. Our client examined the patient and was of the opinion that the confinement would take place on or about the 23rd of that month. The next intimation our client received was on January 23rd, last, when the patient's mother called upon our client at his office at about 11 a. m., and requested him to attend immediately as her daughter was in labor. Our client informed her that he was extremely busy as he had several patients awaiting attention in the office and had received urgent messages to attend cases (amongst them being an pneumonia and pleurisy case) and he was also due at a hospital to attend a patient there. Our client offered the services of his partner which services were declined. The patient's mother denied that the services of our client's partner were offered her. Subsequently a medical man was obtained at an increased fee of one pound and one shilling and the child was delivered in the ordinary way. The patient's husband thereupon took out a summons in the Marylebone County Court claiming ten pounds damages against our client for breach of contract and His Honor after hearing both sides, awarded the plaintiff two pounds and two shillings damages and costs, leave to appeal being refused.

We venture to think that this case establishes a precedent and is one which effects the medical profession seriously, inasmuch as a medical practitioner is now liable in damages should he be unable, through impossibility of performance to carry out the agreement to attend the patient, the date of which at the time when made was uncertain.

The only safeguard it now seems, is for the practitioner to expressly stipulate he is only willing to attend when the time comes, provided he is in a position to do so at the time when called upon.

We are, Sir,

Yours faithfully,

BERRY, TOMKINS & Co.

Mr. Forcht's reply is as follows:

Dr. John J. Moren,

City.

Dear Doctor: I acknowledge receipt of

your letter of May 31st, together with copy of a notice that was in the *London Lancet*, an English Medical Journal.

The point involved in the English case and in the Clark case are analogous and were so interesting that I have devoted some little time in looking up the law in America on the subject. The only case that I have been able to find is the recent case of Moffett vs. Dr. Hood decided by the Supreme Court of Mississippi. The Court in this case, as in the English case, held the physician liable—the facts were as follows:

"Several days prior to the 14th day of September, 1912, appellant entered into a contract with appellee's husband for her benefit, to attend and render to her medical assistance at her approaching confinement, for which he was to receive the sum of \$20.00. This money, according to appellant was to be sent him by the messenger who should summon him to the appellee's bedside, but according to Moffett nothing was said about the payment being made in advance. About 10 o'clock on the night of Friday, the 14th day of September, appellee was attacked by what she supposed to be labor pains. Whereupon a messenger was sent to appellant, who lived in a village about six miles distant, to come at once, the sum of \$12.50 being sent by this messenger to be delivered to the doctor along with the message; that being all the money Moffett then had. This message was delivered to appellant at the home of another female patient, who was then also about to be delivered of a child. At what hour this message was actually delivered to appellant, if the same is of importance, does not appear, but the messenger left Moffett's residence about 10 o'clock p. m., and returned before 2 o'clock a. m. Appellant could not leave patient he was then attending, so that this messenger sought to obtain the services of two other physicians in the village, but having failed to do so, returned to appellant and again requested that he attend Mrs. Moffett. Appellant agreed to attend Mrs. Moffett, and told him to tell her husband that he thought he could leave his then patient in about an hour and a half, and that if he could not leave within that time, he would get up there between then and daylight; and also to tell Moffett that in event he, appellant should not be needed for Moffett to let him know at his expense and save him the trip up there."

According to the testimony of appellant, the message he sent Moffett was as follows:

"I told him to tell Mr. Moffett I would be up there to-night, provided I got through with Mrs. Lott. If I didn't come that night to wire me the next morning at my expense if his wife was still sick I would come in the morning, to save me the drive up there."

The patient, appellant was then attending was not delivered of the child, and continued to require his immediate attention until about 6 o'clock P. M., of the next day. When Moffett's message was delivered to appellant the messenger also gave him the money sent by Moffett which he, appellant, accepted and retained. Mrs. Moffett's child was not born until the night of the following Thursday, she having then obtained the service of another physician. There was some testimony of physicians that Mrs. Moffett must have been mistaken in thinking that she was suffering from labor pains when her husband set for appellant; that her pains must have been "false" instead of real labor pains; but if false, the pain could have been relieved by a physician. On the contrary, Mrs. Moffett stated, that she had given birth to a number of children, that she knew labor pains from past experience and that had Dr. Hood attended her on the night or morning after he was sent for she would have been delivered of the child within two or three hours. She suffered pains stated to be labor pains at intervals from Friday night until Thursday night. Appellee's husband stated, that he went to appellant's office Monday afternoon to see him about the matter, but that he was absent at a lumber camp some distance away. Appellant stated that had he been again requested to attend Mrs. Moffett he would have done so, provided, the remainder of the fee was paid; that he kept the \$12.50 intending to apply it in the event he should not be called upon to attend Mrs. Moffett, to an indebtedness then due him by Moffett for services rendered to his family in the past."

This is the only case that I was able to find on the question in the United States. In the absence of any direct authority on the question, I found a few cases which are somewhat analogous.

"A physician was in *Lathrope vs. Flood* (1900) 6 Cal. Unrep. 637, 63 Pae. 1007, held liable for damages resulting from a violation of his contract of employment because she screamed.

In *Barbour vs. Martin* (1873) 62 Me. 536, an action for malpractice, abandonment of a patient without notice, while the attention of a physician was still necessary, was alleged. The case turned on the admissibility in evidence of a conversation between the patient and a third person, which tended to show that the patient had no knowledge of the doctor's absence from town. The Court said "That when a physician is called to see a patient and attends, nothing being said as to the time, it would certainly be a dereliction of duty to leave that patient in the midst of a critical sickness without cause, or without sufficient

notice to enable the party to procure other suitable medical attention.

While attendance on other patients, or exhaustion from overwork, etc., were not interposed as a defense, a physician employed to attend a woman about to be prematurely delivered of a child was in *Adams vs. Henry* (1911) 165 Mich. 554, 131 N. W. 62, Ann Cas. 1912C, 829, held negligent in failing to attend the patient as promised, in response to repeated telephone calls, and liable for any injuries resulting therefrom. The Court said: "We are of the opinion, if plaintiff had been permitted to produce, and had been able to produce, testimony tending to establish the statements contained in the offer, that it cannot be said as a matter of law that defendant was not negligent. If defendant was present and responded personally to each call that is said to have been made upon him between 11 and 12:30 o'clock, and upon each occasion agreed to at once attend the plaintiff, and failed to keep his promise, we think he should be held liable, if his failure to attend resulted in injury to plaintiff. We note that plaintiff did not offer to prove that the laceration of the cervix and the rupture of the perineum resulted from defendant's failure to attend, as it is alleged he had agreed. The declaration contains the averment, however, and we are disposed to the view that plaintiff should have been permitted to offer such testimony as she possessed pertinent to the issue.

In *Ballou vs. Prescott* (1874) 64 Me. 305, an action against a surgeon for alleged malpractice one of the causes of the complaint being that he abandoned his patient while still needing medical attention, the Court said; "The care and skill which a professional man guarantees to his employer are elements of the contract to which he becomes a party on accepting a proffered engagement. They are implied by the law as resulting from that engagement, though it be but verbal, and nothing said in relation to such elements. So, continued attention to the undertaking so long as attention is required in the absence of any stipulation to the contrary, is equally an inference of the law. If a counselor at law undertakes the management of a cause, nothing more being said or done than simply to offer and acceptance of a retainer for that purpose, it will hardly be denied that an abandonment of the cause before its close would be as much a violation of the contract with the client as a neglect to use the requisite care and skill in its prosecution, and the duty of continued attention is equally an implication of the law as that of exercising the required care and skill. That the same principles apply to the employment of a physician or surgeon, there can be no doubt. If he is called to attend in the usual manner, and undertakes to do so by

word or act, nothing being said or done to modify this undertaking, it is quite clear as a legal proposition that not only reasonable care and skill should be exercised, but also continued attention so long as the condition of the patient might require it, in the exercise of an honest and properly educated judgment and certainly any culpable negligence in this respect would render him liable in an action."

If you care to, you could publish the meat of this letter in the JOURNAL, as the question is a very interesting one and should be called to the attention of all physicians, so that they can protect themselves from any malpractice suits based on their failure to carry out their contract,

Yours truly,

FRED FORCHT.

THE DOCTOR.

Our General Counsel says, that 99 per cent of malpractice suits originate from a word from another doctor.

I am glad to say that the profession at large is realizing our position and *think* twice before speaking.

Several honorable men have talked to me about this question and others have been painfully reminded of the fact that they talked too much. Just criticism is welcomed by any just man, but before we begin to criticise, let us first ask ourselves the question. What would I have done under similar circumstances? Can I, from the information I have, justly criticise this work? Should we consider such questions how many cases could we honestly criticise. Bad results do not constitute errors upon the part of the attending physician. If such was true, how many of us would escape.

Deformity resulting from a fracture is not sufficient reason for you to say, Dr. X failed to use proper splint or removed the splint too early. Because the patient says the doctor told him to do so and so, is not sufficient reason for you to say he ought to have done so and so. Patients misunderstand, misinterpret the instructions of doctors. "Our acts are too readily misjudged and our motives too easily suspected." Consequently you have no right to pass judgment until you have the doctor's explanation.

I am perfectly satisfied that the majority of the physicians do not mean to do harm to others. They simply talk and think afterwards and in many instances regret what they have said when they realize that their opinion has caused the patient to abuse their former doctor. When you are consulted give your opinion. Your opinion and advice is what the patient wants, but give it in a manner that will inspire confidence or respect for the former doctor.

In two or three counties in Kentucky there seems to be discord amongst the profession.

In one instance there might be a reason, provided the reports which reach me can be verified.

In all communities there is a difference of opinions upon all questions, but why men will let personal questions become a detriment to the profession at large, I cannot understand. We all have intimate friends, friends, acquaintances and enemies. Such is the experience of all men. Some have the happy faculty of antagonizing, but few, while others seem to be getting in hot water all the time. If this latter class must live amongst us, is it not reasonable for us to ask that they conform to such laws which will be to their benefit as well as to the benefit of the profession at large. Should these counties continue to excite suits by their personal envy of each other, I am in favor of depriving them of the benefits of the Medico-Legal Committee.

Money collected for a mutual purpose should not be used to fight suits instigated by a spirit to "get even" "run his out of this neighborhood."

FEAR OF DISSATISFIED PATIENTS.

There is a tendency to avoid patients who are threatening to sue their former doctor. In one instance, a doctor asked another in a nearby town to look after a dissatisfied patient. For some reason unknown to me, he declined to touch the case. The result was, that the patient consulted a third doctor and a suit was filed.

Circumstances must always govern our actions: It is hardly fair for me to say, the doctor ought to have assumed charge of this case. But I do know that the first physician and your committee would have felt far more satisfied had he done so.

I do not advocate this procedure for the purpose of keeping disgruntled patients "in our family" but for the fact that the patient and doctor would fare better in the hands of liberal minded men.

My experience has convinced me that the average doctor is perfectly sincere and wishes to do his best for his patient. The average doctor will not do things to incriminate himself, for, or against doctor or patient.

Feeling as I do, it is not reasonable to ask you to act as judge, advisor or "go between" and check many unfair and useless legal cases. Many men do this, why not all. This procedure will hurt no one.

Often a simple explanation of facts will dispel the anger of a patient. They are ignorant of medical questions and a talk with one in whom they have confidence will do a great deal of good.

FEAR OF SUITS.

There is an over-anxiety by some for fear a suit will be brought for bad results. Recently, a good practitioner told me of a fracture

case with non-union. He evidently made a good adjustment of the two ends but they failed to unite. The doctor brought the patient to the city for treatment and paid most of the expenses. This was very kind of the doctor but unnecessary. The law does not look upon the doctor as warranting a cure, neither does the law expect you to put a broken leg in as good condition as before injury. If this was so, who of you would attempt to treat any disease.

You contract to use reasonable care and skill and to give them the benefit of your best judgment. Bad results do not constitute malpractice unless it can be proven that the doctor was negligent or unskillful. Because these bones will not unite does not say that it was the doctor's fault. The obligations assumed by the doctor made it appear that he blamed himself and the next time this man gets in trouble, he will try and pull off the same stunt.

I do not wish to leave the impression of advocating, seeking vindication in the courts; but if the doctor complies with his contract; does what is expected of him, I do not want him to assume the burden of something for which he is not responsible and could not avoid.

There is a false fear about the notoriety of a malpractice suit. Doctors say, "I would rather pay one or two hundred dollars and get rid of this suit." Suppose he does this, who is benefited? The lawyer picks up an easy fee, the patient receives a few dollars and the doctor finds that he has been "held up." His reputation is not one bit better by taking such a course. What influence will this have upon other doctors? It establishes the fact that some easy money can be obtained and others try it.

I do not advocate refusing to compromise all cases. Some are far more equally adjusted by compromise than by trial. But those cases that are instigated by fraud or false claims and where the doctor has done his best, should not be compromised in order to spare the doctor's reputation or to avoid the trouble of a suit. Such procedure does not do the profession one bit of good, but harm.

No information has reached me, that a doctor's practice has been materially effected by a suit. Possibly the friends of the patient went to other doctors but in most instances this would be a good "riddance."

HOSPITALS.

With the increase in the number of hospitals, infirmaries, etc., and more popular use by the people, it is only natural that legal questions will arise. Several actions have been reported to your committee and other institutions have suffered. It is astounding to hear how quickly a certain class of people will

sue for damages. It is in their mind, they seize the faintest possibility to secure damages. Some will simply lie, practice fraud to start a suit.

The superintendent of an institution told me of a man who threatened suit for a blister on his foot which he claimed resulted from a hot water bottle. Investigation showed the blister was between the toes at a point where the bottle could not reach at all.

I know of a case, where damages were asked for pregnancy which was alleged to have occurred in an institution. It was later proven that the pregnancy occurred before the girl entered the institution and the lawyer was aware of this fact when he was pressing the claim against the doctor. Ought not these occurrences make one careful?

You are not responsible for the acts of an employees of an institution, but you are liable for the instructions given the hospital pertaining to treatment of your patient. The law requires you to give proper instructions for the care of those you are treating.

In private institutions the doctor is responsible for the care of the patient when they enter and therefore responsible for the acts of those employed by him. You contract to treat the patient at an infirmary instead of at home. If you have a private hospital you contract to assume charge of the care of the patient as well as to treat them.

DOCTOR'S COMPENSATION.

In a recent issue of the KENTUCKY STATE MEDICAL JOURNAL, Dr. J. N. McCormack referred to the question of the Doctor's income, a very timely question.

The doctors are compelled to appear in their best. The patient likes to see his doctor in the best looking vehicle, clad in the neatest clothes, look full blooded and fat. These cannot be had without money.

The mournful whisper of the high cost of living has sounded, echoed and re-echoed in the doctor's home as well as in the working man's. There have been no strikes for shorter hours or higher wages. He has heard the same old story, "Doctor I have had bad luck, won't you reduce this bill?"

It is distressing to note how many suits are brought by worthless patients. You are licensed to practice medicine by the State which allows you to hold yourself before the people as possessing certain knowledge and the privilege to use that knowledge as a means of making money. The license legalizes the implied contract or understanding between you and your patient and you can collect, by law your compensation for services. The law implies a promise to pay, when a patient consults a doctor. The law does not fix your fee other than it must be reasonable.

An interesting question now arises. What is a reasonable fee? Some states hold that you can gauge your fee according to the ability of the patient to pay. Others say that the rich should not have to pay more than the poor. The interpretations of the law upon this question seems to be that a collectable fee is one that the doctors of this particular community have been charging for similar work and is understood by most people that such a fee is usually charged. It is for the doctor to establish a certain charge in his community; be it large or small. You gauge the standard of your competency and class of work by your charge.

There is no doubt in my mind considering the time spent, the requirements, class of work, the risk, etc., the doctor does not receive a fair compensation; provided he exerts the energy he should in order to fulfill his contract, as other contractors attempt to fulfill theirs. It is with the doctors to raise the average income of the profession.

COLLECTION OF FEES.

When a patient consults you he implies a promise to pay and your claim can be collected by law. The compensation is part of the contract implied when you assume charge of the case.

The error which we make, is too hastily resorting to the court to collect from disgruntled patients and poor people. We should carefully discriminate between those we expect to sue and especially as to whether they are able to pay the judgment.

If a man is so ungrateful and unmindful of his obligation to refuse to compensate you for your time when he was in need, he will resort to other things to embarrass you.

The practice of counter-claims against a suit for collection of fees is becoming very common. It is astounding to hear the facts in some cases. It is deplorable to think that attorneys will do such practice.

Malpractice is a good counter action to avoid payment. Often the doctor tries to collect a \$10.00 to \$25.00 fee from an individual who is struggling for a living. Such people when ill advised or angry at their doctor, may precipitate a suit. However, in many instances it is only a plea to avoid payment.

It is somewhat generally thought that a judgment by default in the lower court is far less protection than one obtained when defense is offered. No doctor likes to sue his patient, neither do they like to lose their fee. We feel justified in suing many cases and many ought to be made pay their just debts, but my advice to you, is to be careful.

PATIENTS.

Little has been said about the patient. This was intentional, as my remarks have been

for the doctor. However, it requires two parties to enter into a contract and the law holds each one responsible for their obligations. The patient must do his best to follow your instructions, he must act diligently and use good judgment, as is required by the doctor. If you are legally licensed, the law assumes that you are skillful and diligent and the party suing must prove that you are otherwise.

CONCLUSION.

Your committee has met the cases presented and the profession has won a good victory. One hundred and four cases have been reported, only twenty-two are now pending. We have lost only four cases, amounting to about \$3,000.00.

This victory cannot be attributed to tactics unbecoming to the legal or medical profession; but by a fair fight and faithful cooperation of all. I am glad to say that no one has refused to lend any aid asked of them. The past eight years' work has shown that nine out of ten cases have absolutely no merit and the tenth is even questionable. There is a material lessening of the number of suits for 1916. Sixteen against twenty-three in 1915.

It is for the doctor to follow up this victory by giving his *best* services to those who employ him, by being just to his fellow practitioners, by being broad-minded enough to disregard petty personal attacks, by being honest to himself and to collect a sufficient sum each year that he will be held as a respected, honored, useful citizen of the community.

Sequelae of Antityphoid Inoculation.—The effects of prophylactic inoculation were observed by Boyd on the 18,000 men composing the North Midland Division of the Territorial Force. In quite a number of cases definite evidence was observed of a considerable increase of intestinal activity. In one case inoculation bore a close causal relationship to an attack of typhoid. In four cases jaundice developed a few days after inoculation. In two cases inoculation was closely followed by an attack of pneumonia. Three cases of severe urticaria came under Boyd's observation. In one of these the color was of a remarkably vivid hue; it was as if the patient had been steeped in some anilin dye, such as eosin. In no case did the condition last for more than forty-eight hours. None of the cases showed any rise of temperature. The author concludes that in the great majority of cases inoculation is a harmless procedure, involving at the most a certain degree of temporary discomfort, and those constitutional symptoms comprised under the term "inoculation fever." In a few cases the sequelae are of a more serious character, and in some instances inoculation may be followed by such conditions as pneumonia, appendicitis (two cases) and severe gastro-intestinal catarrh.

THE DOCTOR CONSIDERED AS A BUSINESS MAN.*

By GEORGE COWAN, Danville.

As compared with any other of the learned professions, or the more important industrial activities of life, a medical career in the latter half of the 19th and the opening years of the 20th centuries is a most dismal failure, financially considered.

For scientific interest the field in medicine is a wide one of intense interest, and of continually widening expanse; the reward almost exclusively in achieved success is in the acquisition of knowledge of the well established facts and newly-made discoveries in medicine; with constantly increasing skill and accuracy in applying it; the pecuniary compensation a negligible factor, and a very much neglected consideration, so far as the profession as a whole or corporate body is concerned.

It would prove a very interesting and practically useful procedure, if at this juncture, we could submit to an expert actuary the problem of a balance sheet, of the assets and liabilities of a life-long medical career.

The data to be submitted would be as follows:

The expenditure of almost half an expected life-time in preparation, and the maintenance of it until its close in keeping fully prepared and abreast of the steady and rapid progress of the times.

The outlay of a large capital.

The hardships.

The mental and physical wear and tear.

The risks of health, life and limbs.

And lots of other painful experiences, too tedious and disagreeable to talk about.

Yet they are all liabilities significantly peculiar to medicine and to which the actuary must assign an appreciable value in shortening life and loss of efficiency in actual work.

The last items in the column of liabilities might be summed up as follows: Charity practice, competition of quacks and druggists, demoralizing professional under-bidding and fee-splitting crooks and exploiters of criminal operations.

Turning now our attention to the assets, the American Medical Association in its code of ethics, (Art. 7), lays down a tangible and definite basis for estimating and securing adequate compensation for medical service as follows:

"Some general rules should be adopted by the faculty in every town or district, relative to pecuniary acknowledgements from their patients; and it should be deemed a point of honor to adhere to these rules with as much

uniformity as varying circumstances will admit."

There is reason to believe that for a season its requirements were in a measure complied with; and written schedules of fees were made out and subscribed to and some creditable degree of uniformity of practice established.

But the result has been pretty generally reached, that in matters of medical finance every individual has become a law unto himself, and that local and general organizations have paid little or no attention to maintenance and periodical revision of schedules for general practice of probably 50 or 75 years standing.

Now during these last five or seven decades the cost of living has increased by leaps and bounds, while there is every reason to believe that medical fees have remained stationary in general practice, nor have fees in general surgery or the specialties kept pace with the increased cost of living.

At the same time let it be remembered that the cost of equipment and supplies has increased in the same ratio as the cost of living. The basis for estimation of fees in Danville is taken in large measure from the one adopted by the Boyle County Medical Society in 1865. Compare if you please the cost of a modern office with the one of '65. At that date there was no bacteriology, no laboratory with its costly equipment, costly in actual cash outlay and in time and labor spent in studying cases. Surgery of that era was confined to what are now considered almost minor operations and which were done with a few instruments. Compare modern surgery with its numerous, complicated and expensive equipment. Think of the suture material, of expensive anesthetizing outfits; of the numerous electrical devices for examination of the interior of the bladder and rectum and throat and larynx.

The cost of a single X-ray apparatus would have maintained the equipment of the doctor of 1865 for all time.

Furthermore the proclamation of emancipation, freeing the slaves, reduced by more than one-half the pay practice of this town and county as elsewhere throughout the South, 90 to 100 per cent. of which was collectable.

Since which time 0 to 10 per cent only might be so regarded.

The inherent and distinctive spirit of altruism and humanity, which in all civilized lands and ages has characterized the great majority of the medical profession, nobly responded to the call for its services, the public generously surrendered as it always has and always will, its share of the burden.

In this matter of charity practice and meager returns for so-called "paying practice,"

*Read before the Central Kentucky Medical Association.

we are in bondage to much of faulty custom and precedent.

The relations of the profession to the public in the matter of public duty in charity practice and of physicians to each other in compensative practice is glaringly faulty and of evil import alike to all concerned.

The public, of course, is satisfied with prevailing conditions, but physicians should not be.

For a livelihood in the practice of medicine success is laggard, returns come in slowly; and even when emoluments are balancing expenditures, the profits are often so inconsiderable, he is considered fortunate who makes a decent living for himself and family. But he can have no leisure or vacation time, can not be with his family and give it due personal attention: the income stops when he can not work, whereas in other lines of endeavor a colleague or partner can carry on the business.

It would be useless or worse than useless, to discuss the financial and other perplexing cares and disabilities attendant on a medical career, if there is neither desire or aspiration of hope that these disheartening professional disabilities may be removed.

Would it not be placing a false and unjust imputation upon the courage, manhood and intelligence of the Central Kentucky Medical Association to think of it as otherwise incapable of meeting the issue involved in removing these obstacles to professional and financial success.

For some months it has remained in a state of suspended animation,—it is not dead but sleeps and under the leadership of our faithful and enthusiastic secretary, will be resuscitated, and awoken as a giant refreshed from his slumbers to greater and more fruitful service for the profession of the four counties of which it is composed.

We will, then, not need a single great leader and law-giver like Moses of old to lead us out of our house of bondage and wilderness of confusion and chaos into the happy land of equal privilege and opportunity with other wage-earning and industrial organizations.

One of the rules or precepts of successful warfare of a military hero of ancient Rome reads thus:

"Ne fas est ab hoste doceri."

"It is right and proper to learn and employ the tactics of our friends the enemy." In our case the general public and unworthy or unethical confreres.

In conclusion I shall make free to suggest, for consideration, one and only one item, for re-organization and resuscitating the Association—the adoption of Article 7, of the American Medical Association's code of

ethics, as the basis and guide by which to formulate some common, intelligible system of finance for our four counties.

It is broad enough and is sufficiently elastic and adaptable to conform to the needs and different usages and customs of each county.

A commission might be appointed to consider this matter in connection with a possible re-organization of the Association, making some protective provision for better medical financial relations with each other and the public and in proper proportion to the present and constantly advanced cost of living.

WHY A MEDICAL SOCIETY?*

By L. D. HAMMOND, Irvin's Store.

The subject assigned to me to-day, while apparently a simple question, carries a very great deal in the answer, more than I could get out of it in lots more time than I can devote to it to-day, but to look around us to-day, and see the busy doctors devoting the day to the interest of what the society calls for; not only this, but look at the intelligent people who are here to listen and take part in the discussion of questions brought up, it seems to me a wonder that such a question should be asked, for you can see the answer better than any one can tell it.

Ever since the first medical society met in London in 1773, more than 140 years ago, there has been a medical society, and the names of the men making up that society is sufficient to show that the good men, the best men of the profession, were getting enough out of their deliberations to give them returns for their time. You will find among them such names as Meyers, Hume, Blair, Sims, Walker and the immortal Jenner, as well as others equally famous.

They were not too busy, as some of our doctors are to-day, they did not know enough, they did not fear losing an obstetric case sufficient to keep them at home, but they did know enough to realize that where there was free and open discussion, there was also new ideas to get and more knowledge to gain. Of such men are good societies made, to such men we would be not afraid to trust our loved ones because they knew enough to want to know more, and this is one reason why a medical society, that we may learn to be better doctors, more efficient surgeons and, of course, better men. There has been a time when the common people, the laity, looked upon these meetings with distrust; they had an idea, (and I have heard them express it) that we met to have some secret talk, to boost prices or something on that order and consequently

gave us no credit for the efforts we were making to place our profession on a higher plane. Was it a wonder then the question, "Why a medical society?"

But after twenty years a member of this society (and I have missed but few meetings) I have seen this distrust give way to interest in the meetings, not interest alone, but actual help; for which we are all very grateful.

At last you people can see that what we have been trying to do is to your interest, you can see that with your help we are doing a work which is very unselfish, which will benefit you more than it will us. What is that work? and why a medical society, become analogous questions.

What, then, is the answer to the question: "Why a Medical Society?" It is to disseminate ideas among all the people that will aid in eradicating sickness, preventing diseases that are preventable, (and most diseases are preventable) to aid in making disease that we can not prevent easier to handle by better sanitary surroundings, and better modes of nursing, and so on.

Again, why a medical society? We doctors who work seven days in the week, three hundred and sixty-five days in the year, and half the nights surely should have a day off once a month to meet each other, to rub up together, to feel free to talk, to lambast whoever you please and get lambasted in return, to get what ever some one else has to give and to give whatever you can in return.

No, I am never too busy to go to a medical society meeting. Why a number of times I have had difficult cases on hands and, it seemed that what I was doing was not sufficient, I have been discouraged. I meet my brother practitioner at the society, he perhaps has a similar case, he tells what he has been doing, or I relate my case, I get the practice of all the others, if I am doing all that any one else is doing I feel that I am doing my duty, if some one else can give me an idea, (and most commonly they can), I still feel good. So you see, it not only helps the doctor to attend the meetings, provided he does not already know enough, and only a few of us do, (and they are the ones who stay at home) but it helps those who are sick and you who are well.

Then the question, "Why a Medical Society?" You should have asked those good old society men like William Blair and J. T. Wesley, who have passed on to their reward, I have heard them both advise people in making a choice of physicians to say choose a man who attends his medical society. The reason, of course, is apparent. In my territory nearly every one knows a week or more before hand when the county meeting comes up, and they will come the day before or the night before to get a little medicine to tide

them over, because they know that I will not be at home the next day. You know the old saying, if the little nigger ran off you could find him in the woodpile, so likewise if you want to find a doctor, I say advisedly; a doctor, on society day you may look for him at the meeting place, and it is a mighty good place for him to be, and I might say for the laity too, for those who attend are always up-to-date citizens. God bless them they have begun to be interested, and are helping us to do things. Then, again, "Why a Medical Society?"

Well, I have not answered the question; I knew I could not, but somehow I know, that you all know why better than I do.

You, perhaps, are like me, you can feel it better than you can tell it, you feel that it is a place where all can meet on equal terms, and feel free to talk, free to act, and have a respite from the every day grind, and go away feeling that it was good to be there. May God help us to persevere in the good work that will help us to save and preserve and prolong the lives of the dear ones, whose presence with us means more than all the broad acres or paltry dollars we may possess; enable us all to come back to the next meeting where ever it may be, to help spread the gospel of preventing disease, and thereby make our lives worth more to us as well as our fellow man.

Gentlemen, I have but little conception of the future. I know not where the good resting place is. I have no idea of what it is like, or what it may be: but this I do know; when I am done writing prescriptions here, done doubling little papers with powders in them, done handing out pills, if my lot may be cast with and among you and the good old country doctors who originated and helped in this good work, I will be satisfied.

So, friends, when the Great Physician calls us at last and we must lay off the harness here, let us hope to join again in that eternal society just beyond the chasm of Death we have so faithfully fought here, where we will need not to discuss seasons or sickness, science or sanitation, disease or even death, but will have a rest from our labors, an eternal vacation, where there will be no need of asking the question: "Why a Medical Society?"

Sodium Perborate in Treatment of Wounds.—

Bourgeois applies the sodium perborate as a dry powder. As it becomes moistened by the secretions it generates oxygen and acts like the ordinary solution of hydrogen dioxide, only that it is alkaline. He fills up the wound cavity with the powder, without draining, with a flat dressing above, renewed every day at first.

LOCAL ANESTHESIA.*

By W. I. HUME, Louisville.

The profession seems prone to think of local anesthesia as a minor branch of the general subject of anesthesia, and as useful in minor work only, but it is a fact that an increasingly large percentage of all kinds of operations is being done under local anesthesia.

Braun compiled statistics from several of the larger surgical clinics in Europe for a five years period up to and including 1912, which show a constantly increasing number of operations under local anesthesia. His percentages for 1912 range from 15 per cent. to 54 per cent. I find from the Mayo Hospital report that over 10 per cent. of the total number of operations performed there are done under local anesthesia. Matas states that in his service at the Charity Hospital in New Orleans 55 per cent. to 60 per cent. of all major work is done under peripheral anesthesia alone, and that subarachnoid and lumbar anesthesia are not included in these figures. In our own work we estimate that about 7 1-2 per cent. of operative work is done under local anesthesia, and I suppose this latter figure may be fairly taken as an average for our local institutions. From these facts we can see that when the selection of an anesthetic is to be made, the first question to be decided is not what kind of a general anesthetic, but whether local or general.

It may now truthfully be said that almost all the ordinary surgical procedures are possible of accomplishment by the use of the local anesthetic. The range of the practical use is determined by each individual operator for himself. I had almost said that since we now have in the novocaine and adrenalin combination, a practically perfect local anesthetic, the scope of local anesthesia in the case of each individual operator is determined by his mastery of the technique of local anesthesia, his special knowledge of nerve anatomy and his ability to handle the tissues of the body quickly and gently.

The surgeon who operates hurriedly and carelessly, or recklessly traumatizes the tissues as a matter of habit, will find it difficult and irksome to operate under local anesthesia; but the operator who realizes that an operation is only an aggregate of trauma, of loss to the body in cells killed and wounded, and that every cell added to these lists is either a direct loss to the human body or an addition to its burden, one who makes careful diagnosis and likes delicate, direct, sharp dissections, will find local anesthesia well suited to many of his cases.

We believe many cases now being operated upon under general anesthesia would much more properly belong within the scope of local anesthesia. We believe this because we have a local anesthesia that is non-toxic in any reasonable amount, which requires no elaborate preparation of patients, no complicated or expensive apparatus or unusual length of time for its administration, requires no one to watch constantly its effects and which cause no unpleasant or harmful after effects, none of which things are uniformly true of any general anesthetic.

Of the many agents which have been used to produce local anesthesia only novocaine need be considered here, though cocaine is still used by eye, nose and throat men, alypin is used by some in urological practice, and ethyl chloride is often used when superficial abscesses are to be drained, etc. Also, for prolonged local anesthesia, many uses are found for quinine and urea hydrochloride. Quite severe pain is experienced during the thawing out of the tissues following ethyl chloride. Alypin produces pain on injection and sloughs have been known to follow its use. The toxic properties of cocaine are well known, while the use of stovain and tropacocaine is now limited almost entirely to lumbar anesthesia. Quinine and urea undoubtedly delays healing and favors infection.

The experiments of Braun proves that as much as 250 c.c. (1 1-4 gram) of a 1-2 of 1 per cent. solution of novocaine may be used without the slightest toxic effect. The only toxic effect noted by Liebl and Krecke, who performed experiments upon themselves, were with high concentrations of the drug, 2 c.c. of a 10 per cent. solution producing after five minutes slight nausea and vomiting. Such concentrations of the drug, of course, need never be used in surgery. We have repeatedly used as much as 125 c.c. without the slightest irritant or toxic effect. Novocaine is the local anesthesia of choice. The anesthetic effect, however, of novocaine alone is too fleeting to be of much service. This difficulty was overcome by its combination with adrenalin.

Adrenalin is produced from the supra-renal glands of animals. A synthetic preparation identical in its pharmacological action has been produced which offers more in the way of cleanliness and constancy of action than the preparation made from the organs removed from slaughtered animals. This synthetic preparation may be sterilized by boiling. Suprarenin is of importance in local anesthesia owing to its anemia-producing properties. It has no anesthetic action, but the local action of other drugs is made much more intense and continued for a much longer time when combined with it. This drug is not without toxic effects, 1-2 c.c. of a 1 to 1000

*Read before the Eagle Valley Medical Society

solution has been known to produce severe general symptoms for a brief time. Inasmuch as a solution of 1 to 100,000 or even 1 to 200,000 will produce a practically bloodless field, the toxicity of the drug need not be taken into account. I may state here, however, that in my own experience with this drug I have seen two cases where symptoms followed its injection into the neck for the ligation of the superior poles of the thyroid. Symptoms were slight and quickly passed. We were at a loss to explain these cases at the time, as no unusual amount of the injection fluid had been used, but later we decided that either a mistake in the percentage of the solution had been made, or that the needle had entered a blood vessel.

Our favorite concentration for general work has been novocaine 1-2 of 1 per cent. and adrenalin or supra-renin 1 to 12,000. Lately we are using much more dilute solutions of adrenalin and find them equally satisfactory. This combination may be painlessly injected and will produce ischemia of sufficient intensity for all purposes, and anesthesia after five to eight minutes.

We may remark here that a common mistake is to begin operating too soon after the injection. Though not always necessary, it is usually better to wait ten full minutes after an infiltrating injection than to begin earlier and risk your patient's confidence in your promises not to cause pain. This anesthesia will last, depending greatly upon the activity of the circulation in the part, an hour or more without the use of a tourniquet.

The apparatus used in the production of local anesthesia is very simple and consists, as a rule, of 5 c.c. and 10 c.c. syringes, an assortment of needles and graduated containers for the solution. Any good syringe will answer the purpose, though it is necessary that the syringe be easily detachable from the needle so that the latter may be left in place in the tissues. The needles ordinarily used are steel needles, ranging in length from five to twenty-five c.m., though many prefer irido-platinum or nickel needles. Any of the ordinary containers about an operating room will serve this purpose, though it is convenient to boil the solutions in cotton stoppered flasks.

There are many methods of local anesthesia. Local anesthesia is obtained by application to wound surfaces or to unbroken mucous membranes, by infiltration of the tissues, by conduction anesthesia, by vein anesthesia, etc. I should also mention here Dr. Crile's anociasociation method, though it is a combination of local and general anesthesia. We have carefully kept records in 100 cases operated upon under this method. I believe this method to be founded on sound physiological

reasoning, but in our hands it proved impractical and without encouraging results.

Though conduction and other methods of anesthesia are of special importance in dentistry and in certain special operations, the method of widest application is the method of infiltration of Reclus and Schleich. The technique of this method varies with the operation to be performed. Only a few general principles can here be given.

The whole armamentarium is sterilized by boiling. the tissues to be infiltrated are painted over with iodine, and with a fine short needle a wheal is produced by injecting a few drops of this solution between the layers of the skin. One or several wheals may be needed. The wheal spot becomes instantly anesthetic and a longer, larger needle may be plunged painlessly through this area into the tissues beneath. A comparatively large area may now be infiltrated without removing the needle. The different layers of the tissues must be systematically infiltrated, and in many cases this can better be done after the incision is carried part way down. After the injection is complete light massage of the area will help diffuse the solution and bring it in contact with tissues somewhat out of range of the needle. Some tissues never require infiltration because their nerve supply passes through tissues which must be infiltrated in order to reach them. The pleura and the peritoneum belong to this class.

To sum up the uses and advantages of local anesthesia, we may say that in badly septic, diabetic, marasmic, nephritic, myocarditic cases and in the aged where surgical relief is imperative; in ligations, as of the thyroid vessels; in supra-pubic cystostomy, removal of superficial tumors, minor amputations and in hernia work, etc., local anesthesia finds a wide and important field of usefulness. This statement is not meant to delimit the scope of this work, for as above noted, nearly any operation is possible under this method, and there are few positive contraindications to its use. Allen mentions only children, epileptics and the very nervous persons as unsuited.

We believe all operations in which local anesthesia is practical that local should be chosen; that approximately 15 per cent. to 25 per cent. of all operative work belongs to this class, and that local anesthesia instead of adding to, detracts from the terrors of surgery. In properly chosen cases there is no doubt of its much greater safety as compared with general anesthesia. It does not hinder the operator from doing good work; on the other hand, it rather forces him into the proper respect for the tissues of the human body.

Novocaine is the local anesthetic of choice since it is practically non-toxic and in combi-

nation with adrenalin produces a perfect anesthesia. It requires no more time to prepare a patient for the knife with local than with general anesthesia. The infiltration may be done outside the operating-room or even while the patient is in bed, time thus being saved. No especial preparation of the patient is necessary for this anesthesia, no starving or purging, therefore no depletion of the body fluids. Postoperative nourishment is not interfered with and there is no postoperative pain in the back. There is no dilatation of the stomach, intestinal paresis or tympanites, since there is no interference with the alimentary canal, as is the rule when a general anesthetic is taken.

EMERGENCY CASES SEEN IN THE EYE AND EAR PRACTICE.*

By ADOLPH O. PFINGST, Louisville.

In an endeavor to present some commonplace subject I decided to discuss with you some of the simple emergencies we see in the practice of ophthalmology and otology.

It is an almost daily experience for the oculist of a large city to remove one or more foreign bodies from the eye. The pain and lachrymation caused by these bodies is either the result of the direct cut of the foreign body as it enters the eye or of a continued rubbing of the foreign body over the cornea during the working of the lids. The patient with such a foreign body always feels as though the object were under the upper lid, although we find them with equal frequency there or imbedded in the cornea. Foreign bodies under the lid usually rest against the tarsal conjunctiva and can be found by everting the lid.

The small foreign bodies which enter the eye are either cinders from trains, particles of dust carried into the eyes during a gust of wind or pieces of emery or steel carried into the eyes of men employed at the emery wheel.

You will pardon me for calling attention to such a simple procedure as everting the upper lid, but as in everything there is a correct and an incorrect way of doing this. The easiest way is to have the patient look downward (and this is important) then grasp the alshes with the left hand and turn the lid up over a match or tooth pick held parallel to the lid and 1-4 inch from the margin.

If the foreign body is in the cornea it may sometimes be seen by ordinary daylight, with more certainty, however, by applying the so-called focal illumination, which consists in centering the light of a lamp, situated in front of and a little higher than the eye, upon

the cornea, by means of an ordinary pocket lens, held about two inches from the eye.

As they are generally in the superficial tissue, their removal can be readily achieved with a blunt spatula, without in any way injuring the tissue.

If deeper they must be removed with a pointed instrument made for the purpose.

Among the hands of many of the large factories there exists a so-called "fire extractor," who has gained notoriety among his fellows, for his skill in removing splinters, cinders, etc., from the eye. That his skill is in no relation to his reputation, is evidenced by the fact that his pocket knife serves him as instrument for this purpose, with which he not only removes the epithelium from a large surface, and generally forces the object deeper into the tissue, but also greatly increases the danger of an ulcer, by introducing septic material into the wound. I believe that the same faulty manipulation, though with clean instruments, is often made by practitioners. We frequently see eyes in which large areas of cornea has been denuded of epithelium in an ineffectual effort to remove the cinder.

It is hardly necessary for me to mention the use of cocaine instilled into the eye before attempting the removal of a foreign body. It is a very common experience to have an individual call upon the physician for the removal of a foreign body when none is present. This symptom stimulating the presence of a foreign body, may be due to various conditions, more commonly to a conjunctival inflammation, the roughness of the lids causing the sensation of a foreign body. This can usually be relieved by the use of astringent washes such as zinc solution. The presence of a so-called wild hair (trichiasis) an inverted lash, or perhaps more than one, rubbing against the cornea every time the lid winks would also simulate a foreign body. These should be epilated and will bring about immediate relief.

A common condition simulating foreign bodies is the formation of calcareous deposits in the meibomian glands. These are difficult of removal, but can by use of the knife and curette be removed and thereby bring about smooth lids.

In addition to the injuries to the eyes with mechanical bodies we also see injuries brought about by internal and chemical agents.

The immediate treatment of injuries to the eye, produced by chemicals, consists in neutralizing the same—if acid, by flooding the eye with a weak alkaline solution, such as bicarbonate of soda (baking soda) and if alkaline, of which lime is by far the most frequent, with milk or oil. The excess of lime may also be washed out by moving the face about under water, with the eyes open, and then neu-

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tralizing what remains with a drop of sweet oil. It has been my experience that a stubborn conjunctivitis frequently follows the burrs with alkalis.

The bodies of a thermal nature limit themselves almost to burns from a lighted cigar, and those produced by spurting of molten metal. The latter are often of a serious nature, terminating in the loss of the eye.

What appears as an insignificant injury at first sight frequently terminates seriously by the adhesion of the lid to the ball (symblepharon). The treatment of the burns should be directed toward relieving the pain and irrigation with cocaine and lubricating the surface with sweet oil and endeavoring to prevent adhesions by frequently separating the lids from the bulb.

A frequent accident occurring to the eye, and of which I wish to say a word regarding the prophylactic treatment, is the ecchymosis resulting in the cellular tissue of the lower lid from a blow. If at hand soon after the injury, a proper bandage will prevent the exudation and subsequent discoloration almost completely. The orbit in front of the eye must be filled out with cotton, and then after placing a larger piece of cotton over this, great pressure can be made without endangering the globe. In connection with this, I would mention hemorrhage occurring between the sclera and conjunctiva, brought on by exertion, coughing paroxysms, etc., rupturing the small vessels. This condition, which is mistaken by the frightened patient for an inflamed eye, is of no importance. The blood will be slowly reabsorbed.

The more serious accidents, such as large burns, punctures, ruptures from blows, are cases for the specialist, and need no mention here. To overcome the immediate danger of the escape of the vitreous humor, or of a prolapse of the iris, a compress is indicated. For the minor injuries mentioned above a bandage is not necessary, yes, at times injurious. A large shade, perforated at its concave margin, to prevent the stagnation of warm air, should be worn over both eyes, that the afflicted one may not suffer from reflex irritation of the good eye.

The most frequent emergency involving the ear is the presence of foreign bodies in the canal.

The endless varieties of objects introduced into the ear by children and hysterical women, have been divided by some into bodies of an organic, and bodies of an inorganic nature, the former including beans, peas, etc., that absorb moisture from the auditory canal, the consequent swelling making them more difficult of removal. By the history of the case and by inspection of the ear canal it is usually possible to determine the nature of

the foreign body. If it be of such nature that water will not swell it, as pebbles, buttons, etc., the object can usually be flooded out by means of large piston syringe (6 to 8 oz.) A series of small forcible squirts will generally succeed in dislodging it, especially where it has not become swollen. The stream of water should, if possible, be directed toward that wall of the auditory canal where, between the same and the foreign body, there exists a space by which the water may pass behind the body. Its reflux exerts a force from within outward carrying the body with it. By retracting the external ear, and drawing it slightly upward, the auditory canal is straightened, which furnishes an aid to the manipulation.

Organic objects such as beans, corn, garlic, etc., are best removed with instruments with the aid of reflected light. It is usually possible to find a passage on one side or the other through which a small hook or wire bent at right angle near its end can be passed—after it has passed it can be turned so that the hook rests behind the body which comes out with the hook upon pulling this forward.

If this fails or the body has become swollen it frequently becomes necessary to break the body and remove it in pieces. On account of the tendency of these organic bodies to swell attempts at their removal by syringing should never be attempted.

Great care must be taken not to drive foreign bodies in the canal beyond the narrow part of the meatus (the isthmus) hence I would warn against the use of forceps of all kinds in the removal of foreign bodies.

Living bodies, such as flies and bugs, which accidentally get into the auditory canal, by the magnified sound of the flutter of their wings set up very severe symptoms. These patients can be relieved at once by filling the ear canal with oil to kill the insect and subsequently washing them out with the syringe.

A more serious mishap to the ear and one not infrequently seen is a perforation of the drum with pointed instruments.

We find this occurring mostly in women, who, having introduced a knitting or darning needle to remove cerumen, or to allay an itching, turn suddenly through fright and push the needle against some near stationary body.

I mention these accidents only to warn against a dangerous proceeding, but one which is frequently employed by the inexperienced, namely, the injection of fluid into the ear after such a mishap. This should under no condition, be done, as the fluid which enters the tympanum will give rise to most alarming symptoms, where otherwise, by simply plugging the ear with cotton, to protect against external influences, the wound will unite very rapidly. The same rule applies to

rupture of the drum membrane, brought about by a blow upon the ear, or by the use of the air-douche.

In speaking of the emergencies of the ear, I should perhaps mention the sudden closure of the ear and defective hearing due to the sudden swelling of accumulated cerumen in the canal. This happens mostly in warm weather due to the perspiration or in summer when, while bathing, the water enters the canal and swells the cerumen and causes deafness, tinnitus, and at times pain and vertigo.

I mention the treatment of impacted cerumen merely to call attention to the fact that these plugs can be removed much more readily by softening the cerumen by instillations of warm alkaline solutions. After softening the wax it can readily be removed by means of a large piston syringe.

In considering the emergencies of the nose we also frequently have to deal with foreign bodies usually introduced by very young children. The varieties of objects introduced are as large as those found in the ear, and here they have also been classified into the organic and inorganic bodies. More rapidly than in the ear do the bodies of an organic nature swell in the nose, and more intense is the pain that they produce through their increased size. They may even displace the septum, in children.

Where they have been in the nose for some time they will give rise to a catarrhal discharge becoming fetid later on. A one-sided fetid nasal discharge should always lead to suspicion of a foreign body.

The removal of a small, smooth body recently introduced is often brought about by blowing of the nose.

Bodies that can not be so readily removed will have to be removed through the nasal speculum and aided by reflected light. In most cases a hook can be passed beyond the body and turned so as to extract the body readily upon withdrawing.

It would not be out of place in considering the emergencies of the nose to mention displacements and fractures of the septum due to blows and falls upon the nose, such as are common in foot ball players. Seen soon after the injury the displacement can nearly always be corrected even without much experience in nasal treatment by passing one blade of a large pair of dressing forceps on each side of the septum (under cocaine anesthesia) and by placing splints or packing in the side towards which the septum tends to deviate.

Cases of this kind not corrected immediately result in deformities which would later demand formidable operation for correction.

Owing to the great vascularity of the mu-

cous membrane of the nose deviation of the septum from a blow or fall, is often attended with copious hemorrhage. Compression of the nostrils with index finger and thumb upon the alae, will often suffice to arrest the bleeding. More alarming is the epistaxis when brought about by other causes. The causes can generally be found in pathological changes of the blood vessels, or of the mucous membrane of the nose, or in an abnormal condition of the blood. The veins of the septum may become varicose, or the cause may lie in an abnormal fragility of their walls. The mucous membrane may be altered by ulcerations, polypi, chronic catarrh, etc. The condition of the blood which retards coagulation may be inherited (hemophilia), or it may be brought about by disease of the organism (anemia, leucemia, pyemia, etc.) The vessels resist the pressure of the blood until exaggerated by exertion, a paroxysm of coughing, etc., or until the atmospheric pressure is lessened. In plethoric individuals, or where there exists an engorgement from heart or other diseases, the epistaxis is set up by similar exciting causes. As patients of this kind find relief in the loss of blood, treatment is unnecessary, as long as the hemorrhage is not too profuse.

To arrest an obstinate epistaxis, no matter from what cause, the tampon is the most reliable treatment. Having cut a long strip of gauze the nasal passage is filled from behind forward, that is, the end of the strip is introduced through the anterior nares as far back as possible with the forceps, and the rest packed in front of this. If the hemorrhage still persists the nose must be tamponed from behind. By means of an ordinary urethral catheter, a string is passed through the nose and grasped with the forceps behind. Having fastened a large piece of cotton to the string, a short distance from the end, the plug is lifted into the naso-pharynx with the inserted finger and then pulled forward with the nasal string. The short end of the string which hangs out of the mouth is left intact and subsequently serves to remove the plug.

While the presence of foreign bodies in the nose are the cause of great alarm on the part of the parent, the presence of a foreign body in the throat is the cause of even greater anxiety.

We also find a great variety of objects which lodge in the throat, the two most common representatives being the fish bone, for the pointed objects, and the coin for the smooth bodies.

Rough objects often lodge in the tonsils and can readily be removed with forceps. Those objects passing further down either lodge in the ventricle of the larynx or pass into the trachea and bronchiae. Those in the

larynx have been removed by inverting the child or by introducing the finger. If farther down they become the object of great alarm and of more complicated treatment than I will discuss in this paper.

SOME OBSERVATIONS ON GALL-BLADDER SURGERY.*

By JNO. R. WATHEN, Louisville.

In presenting a paper for consideration before this society, I have selected a topic while an old subject, is one which in recent years has not only attracted much attention, but is a subject very wide in its scope and presenting new features both in pathology and treatment.

While gall-bladder surgery has been practiced for more than twenty-five years with considerable success, we are now coming to a realization of the cause of our failures in the past to permanently cure many cases diagnosed as diseases of the gall-bladder and its associated ducts.

In the early days of gall-bladder surgery we always looked for the classical symptoms of the sharp, shooting pain in the region of the gall-bladder, and this condition becoming chronic, we expected to find the patient presenting the symptom of jaundice. If we at the present time awaited for such classical symptoms to occur in every case operated upon, we would not be able to obtain the brilliant results of the present day surgery.

Chronic indigestion has long been a stumbling block for the internist to treat, and with a better knowledge of the pathology we are fast realizing there are many factors which enter into the causation of chronic dyspepsia. Gastric and duodenal ulcer and also chronic appendicitis are capable of producing digestive disturbances as well as are diseases of the gall-bladder and bile ducts.

The pancreas in its association with diseases of the biliary ducts has also come in for its share of attention. In the early days of biliary surgery we were always satisfied if we could show the patient the gall-stones removed, and we were greatly chagrined if at operation there were none found.

This condition existed in Louisville to such an extent that I remember one of our most prominent general practitioners making the remark that we surgeons had better put a few pebbles in our pocket before we operated on our next gall-bladder case so that if we did not find the stones we would have at least something to show to the patient.

Time has taught us that the classical symptoms of gall stones may be present and yet

at operation no stones be found. These cases were then drained the same as if we had found gall-stones and a marked improvement took place, but the patients sooner or later, in a few months or years, returned to us with symptoms as before the operation.

It has been estimated that probably seventy-five per cent. of patients operated upon for diseases of the gall-bladder remained well if the gall-bladder and ducts were explored and drained, and it is the other twenty-five per cent. which we have failed to cure that return to us that deserve our greatest consideration.

With a recognition of such diseases as chronic pancreatitis and papillomas of the gall-bladder, commonly called strawberry gall-bladders, we have realized that something more than the mere opening of the gall-bladder is needed. In those cases of chronic pancreatitis prolonged drainage is absolutely essential to produce a cure, while in strawberry gall-bladder to simply drain the bladder is only temporary relief and we are forced to do a more radical operation of cholecystectomy, i.e., complete removal of this organ.

While cholecystectomy is not a new operation, it was in the past considered one of extreme difficulty, and was accompanied with a very high mortality. This was due in part to our lack of knowledge of certain pathological principles involved in gall-bladder surgery and the mechanical technique employed. It is an undoubted fact that cholecystectomy produced a greater shock to the patient and is a more serious surgical procedure than simple drainage of the gall-bladder.

It is also a fact that there are certain gall-bladders and certain pathological conditions existing at the time which render complete removal of the gall-bladder impossible at the primary operation, and we should delay this procedure until the patient is in better condition at a subsequent time. While there are certain well defined indications for drainage alone of the gall-bladder, and also certain indications for its removal, there are, nevertheless, border line cases where surgeons of wide experience differ as to what is the best procedure.

In the hands of men of broad experience and good judgment, the proper method for each individual case will always be selected, but if we advocate cholecystectomy as a routine procedure for the average surgeon, we will find that our immediate mortality will probably be alarmingly high. There are many cases on record where one surgeon has removed the gall-bladder and when the patient returned for operation to another surgeon for chronic jaundice, it was found that the first surgeon in his eagerness to remove the entire gall-bladder had even ligated not

*Read before the Eagle Valley Medical Society

only the cystic duct, but embraced in his ligature a part or the whole of the common and hepatic ducts. This mistake should not occur in the hands of a careful operator and it is only possible in the presence of a mass of adhesions when the operation is done by the most skillful.

I, therefore, believe that we should use great care and caution in doing cholecystectomy, and where there is an element of doubt we should resort to the simple procedure of cholecystectomy or mere drainage of the gall bladder.

Moynihan has well outlined the indications for the operation of cholecystectomy when he says it should be done under the following conditions:

1. In injuries of the gall-bladder, rupture, stab or bullet wounds.

2. In gangrene of the gall-bladder.

3. In phlegmonous cholecystitis.

4. In membranous cholecystitis.

5. In chronic cholecystitis with dense thickening of the walls of the gall-bladder and cystic duct, with or without stenosis of the cystic duct, and in chronic cholecystitis, when the gall-bladder is shriveled and puckered and universally adherent. In such cases it is no longer a receptacle for the bile.

6. In distention of the gall-bladder, hydrops or empyema, due to blockage of the cystic duct by calculus, stricture, growth, or external inflammatory deposits; or in cases of mucous fistula following operations for these conditions.

7. In cases of fistula between the gall-bladder or the cystic duct, on the one hand, and the stomach, duodenum, or colon, on the other.

8. In multiple ulcerations of the gall-bladder or the cystic duct, when the gall-stones have eroded their way through the walls into the liver, the duodenum or other protective adherent masses.

9. In primary carcinoma of the gall-bladder.

10. In condition known as "strawberry gall-bladder."

With the technique usually employed in removal of the gall-bladder, there is a great tendency on the part of the average surgeon to overlook a careful exploration of the hepatic and common ducts. Unless a probe is introduced into the cystic duct and passed up into the hepatic duct, and likewise into the common duct, it is impossible for us to know whether calculi are present or not, and I make it an invariable rule in every case where I remove the gall-bladder to also explore the ducts.

I have also noted in these cases where the cystic duct was tied and no bile allowed to drain, we had a slow and tedious conva-

lescence compared with the older operation of drainage of the gall-bladder alone, and recently I have made it a practice in the majority of instances to place a small catheter in the stump of the cystic duct to allow drainage for several days after the operation, when doing a cholecystectomy.

It has always occurred to the writer that if drainage was so valuable in the old operation where we left in the gall-bladder, it should certainly be of equal value for the cure of infection which has involved the ducts and liver after the removal of the gall-bladder.

Mayo has recently called attention to some of the sequelae of cholecystectomy and says that they have noted several cases of chronic jaundice in which biliary cirrhosis has followed a cholecystectomy.

Rolleston, in his latest edition of "Diseases of the Liver," has discussed in detail the origin of biliary cirrhosis in contradistinction to portal cirrhosis. Some authors have even claimed that following the removal of the gall-bladder the patient is greatly annoyed with protracted diarrhea, but it has not been in the writer's experience to observe any such case; in fact, on the contrary, it seems that they suffer from the reverse of that condition and are annoyed with constipation.

Mayo has recently observed that, "Although man has a gall-bladder, there are several animals, including the deer and horse, that have none. It is stated that such animals have somewhat larger ducts, a condition proved clinically to occur in man and in animals after removal of the gall-bladder (Mann). There are about 30 instances of failure of development of the glands reported in man; also it is often found that certain persons have had cystic, shriveled, or functionless gall-bladders for a long period preceding the operation. As to the usefulness of the gall-bladder, some claim it is an unnecessary or obsolete organ, and others that it is a disappearing one. Others claim that the mucus added to the bile from the gall-bladder is of functional importance, and renders the bile less irritating to the ducts of the pancreas should it enter them."

It is now very generally appreciated that the determining factor in biliary diseases is infection of the gall-bladder, its walls, or the bile ducts, and this is the main thing to treat in attempting to cure this disease, the gall-stones only secondary to this previous infection.

If anything can be done by medical means, it should be the treatment of this early infection, and not the medical treatment of the gall-stones themselves. These latter should in every case be removed at the earliest possible moment. Surgical intervention in the presence of acute infection should be delayed un-

til the subsidence of the more acute symptoms, as the risk is much greater at the height of the infection.

If we expect to accomplish the most in gall-bladder surgery we should realize that certain fundamental principles obtain in this line of work the same as in other fields of surgery, and we should not wait until we are dealing with end results of pathology.

If anything is to be accomplished in the way of cure of cancer of the stomach, it must be in the early recognition of the ulcer stage and the adoption of means to prevent its later progress. Likewise, if we wait until gall-stones may be positively diagnosed by the Roentgen Ray, we have delayed longer than we should.

Where there is an element of doubt as to the exact diagnosis as to the surgical condition in the upper quadrant of the abdomen, and where after our modern means of research and diagnosis we have failed to differentiate between gastric and duodenal ulcer or gall-bladder disease, we should not hesitate to make an exploratory operation with a view of instituting treatment at the earliest possible moment for the benefit of our patient.

The mortality in the hands of experienced operators for simple exploration is so extremely low, and its diagnostic possibilities are so great, that the writer can see no reason for hesitation in advising early exploration in doubtful cases.

As my experience ripens both in clinical diagnosis and mechanical and laboratory methods, I am better appreciating the fact that in many cases the best we can do is to diagnose the need of operative work, and upon exploration deal with the case as indicated.

Moynihan has recently written: "Surgeons of the largest experience will from time to time make mistakes—will remove a gall-bladder that would perhaps have been better left; or will leave a gall-bladder that should have been excised. If a mistake is to be made it is better to leave a gall-bladder that some one may later take away, than to remove one which no one can replace."

Gonococci Purulent Conjunctivitis Treated by Iced Normal Salt Solution.—The temperature which can be maintained with cold is almost 0 C., under which the gonococci are killed instantly. On this assumption and the assumption that gonococci are found only in superficial epithelial tissues and do not penetrate deeply, Hecke! says, that we have in iced normal salt solution a harmless effective germicide, easily produced, maintained and easily applied. He cites two cases in which its use was followed by excellent results.

SYMPTOMLESS HEMATURIA.*

By HENRY J. MCKENNA, Louisville.

This paper will be limited to the discussion of those cases showing only hematuria as a clinical evidence of active or latent disease of renal or cystic origin and its possible causative factors. In selecting this title it is not the purpose of the author to advance any new theory either as to cause or treatment, but merely of calling attention to this symptom as an important clinical phenomenon.

Much has been written to show that hemorrhage from the kidney is fairly common in lesions of that organ. In cases tabulated by Elsner, blood was found in the urine as follows: Chronic tubal nephritis 33 per cent; acute tubal nephritis 100 per cent; secondary congested kidney, 100 per cent; chronic interstitial nephritis, 14 per cent. Elsner in this same article, cites cases of profuse hemorrhage with no symptoms and no findings in the urine, which would indicate nephritis, and yet, these after a long time presented symptoms or urinary findings, which are expected of Bright's disease.

Some men are of strong opinion that all cases giving only hematuria as a symptom has as its cause a nephritis, while others maintain that nephritis with hematuria as a symptom has also other clinical phenomenon attending. Nephritis is probably the most popular and in some men's opinion the most ably supported theory to account for renal hematuria. Its advocates maintain that, if a careful search be made, nephritic lesions can be demonstrated in practically all cases of essential or symptomless hematuria.

The question now comes. Why is there such profuse symptomless hematuria when pathologic changes are so slight, whereas in kidneys of patients dying of nephritis in which the lesions are many times worse, there had been no hematuria? And again. Are such pathological changes the cause of the hematuria as claimed by many, or, are they the result of the process which caused the bleeding? These are some of the arguments against the nephritis theory.

There are however, other well supported theories besides nephritis, as well as some definite cause for this type of bleeding. Randall and others are of the opinion that a congestion or venous stasis is the primary factor in the cause of symptomless renal hematuria. This congestion or venous stasis may be brought about in many ways: obstruction of urinary outflow, e. g., by stone, obstruction of blood supply, e. g., by torsion of pedicle, pressure on vein from pregnant uterus or tumor, abnormal renal vessels, congestion sec-

*Read before the Jefferson County Medical Society.

ondary to cardiac lesions, congestion secondary to hepatic lesions, etc. A number of these conditions can not be associated strictly with symptomless hematuria as besides the bleeding, there are other well marked subjective or objective symptoms.

Former observers, notably Rowntree, Fitz and Geraghty, have shown that varying degrees of obstruction of the renal vein are capable of producing albuminuria, hematuria and the presence of epithelial cells and of epithelial casts in the urine. When the passive congestion is more marked, the urine is diminished in amount, but a fair quantity is still passed, albumin and casts are more abundant, and blood is frequently present. The presence of albumin and casts in this type of hematuria is liable to lead to the diagnosis of nephritis and further procedure be abandoned.

Some of these causes, however, are difficult of diagnosis and have as their only symptoms, bleeding or bloody urine. The pathological conditions most often the cause of this form of bleeding and the ones to be eliminated in patients presenting this symptom, are; tuberculosis, neoplasm, stone, pyelitis, chronic and infectious nephritis.

We shall take up in as concise a manner as possible the differential diagnosis of the foregoing conditions.

Hematuria considerable in amount is not uncommonly seen in renal tuberculosis, and has usually been associated directly with the tuberculosis, and especially with the ulcerative lesions present. Albarran considers that in many cases the hematuria is not directly dependent on the tuberculous lesions itself, but is rather due to a concomitant nephritis, and he records instances of tuberculous kidneys where abundant hematuria has been a marked clinical symptom and yet where the tuberculous lesions were slight in amount. Further, the examination of the kidneys often show that the hemorrhage is derived from a part of the kidney at some distance from any tuberculous deposit. Albarran also records instances where hematuria has occurred from the opposite kidney to that affected by tuberculosis and lastly one instance where hematuria occurred subsequently to the removal of the opposite kidney for tuberculous disease, and yet where following the operation the patient lived for many years without developing any signs or symptoms of renal tuberculosis.

In an analysis of 160 cases Rabin found hematuria to be the initial symptom that caused the patient to seek advice in 5 per cent. Renal tuberculosis therefore should be suspected in 5 per cent. of cases and a careful and thorough search made for other diagnostic data. In the absence of pus in the urine

and other evidence of tuberculosis on physical and cystoscopic examination its existence could easily be overlooked. Where there is any probability of tuberculosis or where suspicion is great enough, guinea pig inoculation should always be made.

In cases of neoplasm the bleeding is often present to a marked degree, it is usually of short duration and disappear at irregular intervals. The presence of tumor will usually identify the nature of the hematuria, but in seven cases operated on for neoplasm of the kidney at the Mayo Clinic, tumor could not be demonstrated clinically. It is this group which is difficult of diagnosis. Of 409 cases of renal neoplasm reported by Denaclara hematuria was the initial symptom in 40 cases and the only symptom in 23. Pyelography and the use of phenolsulphothalein are the methods available in identifying the existence of neoplasm. Pelvic deformity will usually be found to be of the greatest degree where neoplasm is present. The calyces as a rule will show retraction accompanied by a narrowing of their lumen and an effacement of their terminal irregularities.

Where a small stone or stones may be the cause of an otherwise symptomless hematuria they will usually be embedded at the end of a calyx. In examining these cases besides careful roentgenographic technique a careful search should also be made for crystals, especially those of oxalate of calcium which if present in considerable quantity would be suggestive of the presence of stone. Braasch has reported cases which were regarded clinically as having idiopathic hematuria. These cases were not operated on and after returning to their homes reported having passed small stones several months later. Numerous and carefully taken X-ray sometimes fail to show the presence of these stones.

Pyelitis as an occasional cause of symptomless hematuria, we will merely mention on passing. It occurs with a chronic indolent infection, confined largely to pelvis and without much active destruction of the substance of the kidney, as hematuria of pyelitis is nearly always accompanied by pain, and is therefore, strictly speaking not of the symptomless type. Urethral catheterization, is necessary however, to determine the source of pus, because pus cells in the voided urine may come from any extrarenal source as it reveals a dilatation of the pelvis with a dilatation and clubbing of the calyces.

We come now to that bone of contention, namely nephritis and as I have remarked in the foregoing regarding the arguments both for and against this condition, as the probable cause of the majority of cases of symptomless hematuria: I will but make mention here of the names of a few of the men, Israel,

Albarrañ, Rovsing, Kustin and others who defend the position that a chronic nephritis is most frequently, if not always the underlying pathologic lesion. The advocates of this theory are apt to be overzealous, for somewhere a line must be drawn between the lesions found only after long search and prolonged bleeding.

There are, of course, many other conditions besides the above mentioned which can and do cause bleeding of a symptomless character. Renal varix or angioma of the renal papilla as an explanation for a certain group of cases presenting symptomless bleeding was advanced by Fenwick. Recently a number of such cases have been reported in American literature. I have in mind one reported by Payne in Cincinnati at the last meeting of the Southern Surgical and Gynecological Society. This was a very interesting case and for its particulars refer you to the transactions of that society.

One of the most interesting and probably the rarest of all causes of this type of hematuria is appendicitis. This may sound paradoxical, though an exhaustive study made by Nove-Jasser and Fagol has thrown much light upon the subject. It may occur in acute or chronic appendicitis and also as a sequel of operation for the removal of the appendix. In the acute form the hemorrhage generally comes on during or immediately after an attack, being ushered in suddenly without any premonitory symptoms whatsoever. Of course where hematuria occurs during an acute attack it can not be classed with the symptomless type. The bleeding is intermittent and generally of short duration and the amount of blood passed variable.

In chronic appendicitis, hematuria generally comes on before a recurrent attack. It is common in patients who have been ailing for a considerable period, who are subject to pain in the stomach, distention, vomiting, uneasiness, or pain in the right iliac fossa and constipation. These symptoms may, or may not, be an accompaniment to the hematuria, however, whether they are, or not, I do not consider it amiss here to go a little further into this unusual cause of hematuria. It is this form which may lead to a mistaken diagnosis of renal disease, particularly calculus, although a careful examination of the patient with reference to the character of the attack, especially if supplemented by examination of the urine and by cystoscopic examination, will do much to reveal the true nature of the trouble. Radiography likewise is most valuable in this class of cases, although it must not be forgotten that concretions in the appendix sometimes give a shadow which may be confusing.

With reference to the pathogenesis of this form of hematuria, the authors state that, in the majority of cases it is referable to local conditions which give rise to renal congestion. They believe that in the greater number of cases that congestion is of reflex origin, being transmitted from the appendix to the kidney through the sympathetic nervous system. Although they admit that in some cases the anatomical relation of the appendix, right kidney and uterus are such that direct transmission from one to the other is possible when inflammatory exudate is formed. They report three cases which come under their own observation, and analyze twenty-eight which they found recorded in literature.

Bacillary infections of the urinary tract are by no means confined to adults, and a considerable number of cases occur in children. The commonest cause as the name implies is the colon bacillus. As is the case in adults, this affection is much more common in females than in males. Hematuria may or may not be a symptom of this affection, though on the other hand it might, however, be the only symptom.

In conclusion I wish to point out the necessity of careful history taking with a careful and thorough physical examination.

The retinal examination may be the turning point of a suspicious case.

An X-ray plate of the entire urinary tract should be made after a thorough cleansing of the intestinal tract.

Varicosities should be looked for elsewhere.

Cystoscopy should show us definitely from which side the bleeding is coming and in case hematuria is not present when the patient is to be examined, waiting should be advised as this point should be ascertained before ureteral catheterization is attempted.

Catheterization of the ureters should follow cystoscopy and here, to exclude bleeding from the ureters, specimens should be taken from the first and second portions of the ureter, and finally the catheter may be passed to the renal pelvis. The specimens should be examined for pus and also should be stained for tubercle bacilli.

After the catheters have reached the renal pelvis, kidney function should be ascertained by the Rowntree-Geraghty test. In the differential test intravenous injection of the drug should be made and the specimen collected for 15 min. or 30 min.

A pyelogram of the affected kidney may be necessary. When this is made care should be taken to drain away the collargal or whatever other medium is used, before the catheter is removed. If after these procedures a diagnosis can not be reached and hematuria persists nephrotomy should be considered.

ECLAMPSIA OF PREGNANCY.*

By J. T. REDDICK, Paducah.

I am aware that this is a well worn and much discussed subject. It has been a theme for discussion for many, many years at medical gatherings, from the big medical associations of the entire world down to the little local medical societies, and even "where two or three are gathered together in the name of" medicine.

In view of these facts, and, that the nature and definite origin of the toxins producing this condition, and the vigorous advocacy of the varied lines of treatment, we are forced to the conclusion that the last word concerning eclampsia has not yet been said. Do not understand at this juncture, that I have any thing new to offer, but, as I have given the subject much study, and within the past few years have written one paper for the State Medical Society and two or three for our local medical society, and this, together with my thirty-six years uninterrupted obstetrical experience, at least entitles me to a respectful hearing to-day.

The picture of an attack of eclampsia made upon the mind of the physician is so impressive that it is indelibly fixed and he can never forget it. Ordinarily "the first sign of the impending convulsion is a fixed expression of the eyes, which soon begin to roll from side to side. The pupils are usually dilated, less often contracted. The convulsive movements appear first about the mouth, which begins to twitch and is drawn to one side, the entire face becomes distorted. They extend rapidly to the arms, the body, and finally to the legs. They are usually clonic in character, though they sometimes take on a tonic form and the patient becomes rigid. The breathing is stertorous, the face congested and cyanosed, the patient foams at the mouth which may be bloody when she bites her tongue. During the convulsion which may last for a few seconds, to two minutes, the woman is profoundly unconscious, and after the movements cease passes into a condition of coma which lasts for a longer or shorter period."

The attack is so terrifying in its every aspect as to greatly excite the friends who may be present, and it may be hard at times for the physician to maintain his mental equilibrium.

Frequency of Eclampsia. Statistical tables go to show that eclampsia occurs once in every 500 labors. (Williams) I believe this estimate is too low. It is probable that this estimate is made largely from cases that enter

hospitals. I am sure that they have been more frequent in my practice, which has always been a general practice, than one in 500.

It is a condition which age does not influence; it occurs in every year of the child bearing period and is more frequent in primipara.

Eclampsia generally occurs during the last three months of pregnancy but may occur earlier. DeLee reported one case as early as the tenth week and fatal cases have been reported in the third, fourth and fifth months.

"The theory that eclampsia is due to an intoxication, is a toxemia, is most generally accepted, while it is admitted that the source and nature of the poisons are unknown. If we knew whether the toxins came from the liver, the kidneys, the fetus, the placenta, the intestines, the general metabolism, disturbed glandular balance, from bacterial activity, or from any other source, it would help our treatment immensely, but as yet we are groping, blindly, empirically."²

Eminent investigators in our profession who have been in a position to do so, have studied the different organs post mortem. It is known that the kidneys, the liver and sometimes the brain show marked structural changes and so many theories have been advanced concerning the etiology that it has been aptly designated the "disease of theories."

"The postmortem findings vary; the brain in some cases has been found anemic, in others plethoric. Oedema of the brain and pia mater may be associated with anemia. Hemorrhagic exudates, if present, are usually found upon the cortex and at the base of the brain. Extensive apoplectic coagula are infrequent. The kidneys or liver are always involved and not infrequently both. The pathologic process is not inflammatory, but rather degenerative in character, and consists principally of cloudy swelling, fatty degeneration and necrosis of the secreting glandular epithelium. In the kidneys it is the epithelium of the convoluted tubules which is affected; in the liver that of the acini. In connection with cell degeneration and necrosis, hemorrhages occur in the periphery of the acini and thrombi form within the inter and intracinous branches of the portal vein. The appearance of this varies with the intensity of the changes above mentioned. In some, changes may be recognized by the naked eye; while in others the microscope is essential for their detection."²

Dr. Geo. W. Kosmak reported a case of an Italian woman 19 years of age, admitted to lying-in hospital May 3rd, 1914, at eleven-thirty p. m., in a condition of coma seventeen hours after delivery. She had been well

*Read at joint meeting of McCracken, Graves and Marshall County Medical Societies.

throughout her pregnancy until the night of May 2nd, when she was suddenly seized with convulsions and was delivered the next morning by forceps at her home. She had a total of 21 convulsions after this, until 2 p. m., May 3rd, when she went into a condition of coma. She did not again become conscious and died at 4:30 o'clock on the morning of May 4th, having had one more convulsion at 3:45 a. m. At autopsy the following facts were noted. The liver was enlarged, weighing 2470 grams and presented numerous subcapsular hemorrhages scattered over its entire surface. Section showed many hemorrhagic areas throughout the substance of the organ. The kidneys showed an acute nephritis. A few petechial hemorrhages were noticed in the spleen. The lungs were edematous and many of the air vesicles were filled with blood.⁴

Page after page might be written showing the efforts of those doing research work. "Every avenue of research has been attentively pursued to discover the cause of puerperal convulsions. Interesting and praiseworthy as these efforts are they have revealed naught that was not known many years ago, namely, that eclampsia is an intoxication the result of poison or poisons accumulating within the maternal organism due to imperfect elimination of effete elements. This means an inefficient action of some, or of all the enunctories of the body, but more especially of the kidneys and liver. The character of the poisonous substances is absolutely unknown."⁵

There seems to be, too, a great variation in the toxicity of these poisons or the susceptibility of the patient thereto, as we may have a convulsion coming on like a "clap of thunder from a clear sky" or marked symptoms of poisoning without the convulsion, or, we may have one convulsion and death, and a hundred convulsions and recovery. The termination of labor may promptly arrest the convulsions, or, on the other hand, convulsions may not occur until after delivery, may become more and more violent and end in deep coma and death.

Prognosis. It is estimated that from twenty to thirty percent. of women affected with eclampsia die and this mortality rate has not been influenced by treatment in the last fifty years. For the child the chances are not so good. Perhaps half the children die. "With persistently high blood pressure and convulsions the outcome is serious. Anuria unrelieved after a reasonable period, inability of the patient to sweat in a hot pack, pulmonary edema, feeble, rapid and small pulse, are unfavorable. With the death of the fetus or its expulsion, the danger of further convulsions is materially reduced. With chronic

nephritis and pregnancy there is always danger of recurring convulsions and uraemia. The cases which offer a serious prognosis are those which develop suddenly—usually late—in which the toxæmia is at once overpowering and uraemic convulsions are the first indication of any disturbance. Sudden arising general dropsy with marked reduction of the urinary secretion and lowered renal sufficiency, toward the end of pregnancy, with or without convulsions, is always ominous. The prognosis is always grave in those cases in which there is early retinal hemorrhages. Pregnancy aggravates existing nephritis. The blood changes are often prompt, the accumulation of toxic material is increased, the added cardio-vascular task invites insufficiency and resistance is consequently reduced."⁶

Treatment. We now come to the all important matter of treatment. Treatment may be divided into prophylactic, medical and surgical. Prophylactic treatment is by far the most important thing for us to get, not only in our own minds, but in the minds of our patrons. We can not hope to have a great reduction in the number of cases of eclampsia, or a diminution in the number of cases which ultimately bring us face to face to all the horrors and dangers of the convulsion until we have educated the public that pregnancy is not always a natural, physiological process, and that the expectant mother, as soon as she knows she is in that condition should place herself in the care of the physician of her choice and be guided by his advice. As Williams says, "there is no condition in which the border line between health and disease is less sharply drawn, since a very slight irregularity often suffices to convert a physiological into a pathological state."

Prophylaxis consists in the intelligent management of the pregnant state. All the enunctories of the body must be kept in the best possible condition. Frequent examinations of the urine should be made, the functions of the liver, kidneys and skin should be looked after, observations of the patient's surroundings, diet, exercise, rest and sleep should be considered.

If, notwithstanding, our care of the patient, prodromal manifestations of toxæmia are observed, then we must resort to vigorous treatment. Elimination in my opinion is the treatment. Catharsis must be free, prompt and regular. Calomel and compound extract colocynt every few days followed by sulphate of magnesia is my favorite. The patient should be restricted to milk diet until there is an improvement in her condition. We should insist that the patient drink large quantities of water which is of value in flushing the system.

Diuretics, such as acetate potash infusion of digitalis, diuretin, etc., may be decidedly advantageous provided we have no organic kidney disease. If the microscope shows much kidney epithelium I am afraid the diuretics may irritate the kidney and prove prejudicial to the case.

Treatment of Convulsions. The eclamptic seizure demands the active and energetic efforts of the attendant to arrest the convulsion and to promote prompt and effective elimination. To control or abbreviate the convulsion my favorite remedies for many years have been the hypodermic use of veratrum and morphia. About twenty-four years ago I heard Dr. J. S. Coleman, of Princeton, Ky., read a paper before a meeting of the Southwestern Kentucky Medical Association on the use of veratrum in the treatment of puerperal convulsions and from that time to this moment the agent has served me well. That was the first time the remedy had been brought to my attention but I think the remedy was first used by Dr. Baker, of Eufala, Ala., in 1859. The initial dose should be from 15 to 30 drops and repeated frequently in smaller doses until the pulse is brought down to 60 or 70. I usually give with the first dose of veratrum 1-4 to 1-2 grain morphia and repeat morphia when the nervous system of the patient seems to demand it. Colonic flushings, especially if there is fecal matter in the intestines and hot packs to promote sweating, I have used with advantage. I have also practiced venesection with apparent splendid results. Teaspoonful doses of a saturated solution sulphate of magnesium should be poured down the patient every ten or fifteen minutes until purgation is produced, if it is possible to do so. Chloroform was extensively used to control the convulsions until recently. It is now regarded by many of our best men as positively injurious and some of them go so far as to say it has produced death by fatty degeneration of the heart and kidney.

The surgical treatment of eclampsia is,

1. Abdominal Cesarean section.
2. Vaginal Cesarean section.
3. Kidney decapsulation.
4. Accouchement force.

During the past eight or ten years abdominal Cesarean section has been resorted to in many hundred cases and has provoked lively discussions in the large obstetrical societies.

Dr. Reuben Peterson, Professor of Obstetrics and Gynecology in the University of Michigan, has written a number of articles on the subject and on May 20th, 1914, read before the American Gynecological Society a

cases of abdominal Cesarean section for eclampsia which was published in the American Journal of Obstetrics, June, 1914. I do not think a review of the literature is calculated to impress one with the belief that the mortality has been reduced by such surgical treatment. These 500 cases represented the work of more than one hundred operators. The man who does surgery exclusively may be inclined to look with much favor on the operation, but there are thousands of cases which can not be treated this way.

Dr. Peterson closes his paper by 34 articles entitled "Summary and Conclusions." The 33rd article reads, "with the present state of our knowledge of the results of abdominal Cesarean section for eclampsia it can not be denied that older and more tried methods of emptying the uterus in eclampsia give better results in eclampsics with normal pelvis and soft parts, hence should not be lightly discarded in favor of the more brilliant and more easily performed abdominal operation."

Kidney decapsulation has been advocated as a surgical procedure for the relief of eclampsia. This has not met with any degree of success in reducing the mortality.

Accouchement force has a place in proper selected cases. I have resorted to it a number of times with satisfactory results.

I desire now to report a few cases of eclampsia taken from my obstetrical record which will briefly show some of the various types of the disease and a brief resume of my treatment.

Case 1.—Mrs. Y., multipara age 33. Had convulsion, gave calomel and veratrum and general eliminative treatment, also blood letting. Case was complicated with placenta previa lateralis. She continued to lose some blood and toxic condition did not improve. One week after convulsion, under anaesthesia, I made a forcible delivery, time occupied 45 minutes. Patient had a roomy pelvis and parts all soft and easily dilatable.

Case 2.—Mrs. C., primipara. Patient was in bad condition from general toxæmia. Apparently no improvement from vigorous treatment. Case was becoming desperate and was near the ninth month. Having consultation it was decided to terminate the pregnancy. Patient was removed to hospital. Violent uterine hemorrhage followed the delivery of the head, which, with the shock of delivery and her toxic condition produced death within a few hours without her having regained consciousness.

Case 3.—May 2., large, robust colored woman, primipara. Called at 10 a. m., had had three convulsions and had convulsion after my arrival. Gave 30 drops veratrum and 1-2 grain morphia hypodermically. Saw her at 4 p. m., very restless and unconscious; repeat-

ed same dose as in morning. Saw her at 8:30 p. m., no symptom of labor except slight softening of cervix and perhaps a little dilatation of os. She had been receiving eliminating treatment during the day, administered 30 drops veratrum and 3-4 grain morphia. Saw her at 7:30 next morning, head of fetus presenting at inferior strait, put on forceps and delivered living baby. Mother was rational next day and made a prompt and complete recovery.

Case 4.—Mrs. H., German Jewess, age 39 multipara, strong healthy, robust woman, no trouble in previous pregnancies. Had not had the care of the patient previously. Normal labor. Seven hours after delivery had convulsion and became profoundly unconscious having had no indication of toxemia at the time of delivery. Veratrum, colonic flushing, and hot packs were all resorted to with no effect and patient died fifteen hours after delivery.

Case 5.—Mrs. B., age 36, multipara, the two previous being twin pregnancies. I had made several urinalyses with negative results. Husband brought specimen January 31st, which showed quite a quantity of albumen. Patient had had mild case of influenza two weeks previously. Prescribed purgative and diuretic, milk diet and advised husband as to danger. Was called hurriedly next morning at 10:30, patient having had a convulsion. She did not take purgative as directed and ate and other things. She began to complain at a large dinner the evening before of meats 2 o'clock in the morning of severe headache and no bowel or kidney action that morning. Gave fifteen drops of veratrum and at 11:15 a. m., she had another convulsion. Gave 15 drops veratrum and 1-2 grain morphia. Gave calomel, compound extract colocynth and sulphate magnesia every half hour. At noon she had another convulsion: repeated the veratrum and morphia and bled her from the arm. At this time her pulse was fifty. At 9 p. m. had good bowel and kidney action and no more convulsions. Patient grew brighter every day and five days later "waters broke" without pains. Soon contractions began and she was delivered of twins again. Confinement was expected not earlier than February 15th. No albumen in urine three days after delivery.

Case 6.—Mrs. B., age 18, primipara. For several weeks had had the greatest amount of albumen in urine I had ever seen. A great amount of edema, scant urine and general symptoms of toxemia. Urine loaded with casts and blood cells. I had been treating her vigorously and had her on restricted diet. She had had typhoid fever a number of years ago and more or less edema of lower limbs since. She had normal labor February 11th, and

some three hours after had convulsion followed by six others during the day. The same treatment as outlined in above cases was followed with recovery. She continued to have indications of the kidney affection for many weeks and may have yet.

Case 7.—Mrs. P., age 21, primipara. Saw her a few days before the expected confinement which occurred August 30th, 1915. She had marked manifestations of toxemia and she was put on the usual treatment. At about the beginning of the second stage of labor I saw her first in her confinement. She had a severe headache and had every appearance of going into a convulsion, being barely conscious. I gave her 25 drops veratrum and 1-2 grain morphia at once hypodermically. Labor was terminated in a few minutes and I am sure I averted convulsions.

Case 8.—Mrs. W., multipara, age 25. Discovered albumen in the urine March 20th, 1916, and she was placed on the usual treatment. Was called to see her March 31st, and found her having some pains, rather a rigid cervix, a severe headache and manifestations of convulsions. Gave her 20 drops veratrum and 1-4 grain morphia. Not only did it, I am sure, prevent convulsions, but softened the cervix and child was delivered one hour later without an untoward symptom.

LITERATURE.

1. Williams Obstetrics.
2. DeLee Principles and Practices of Obstetrics.
3. *American Journal of Obstetrics*, June, 1913.
4. Kasmak, *American Journal of Obstetrics*, September, 1914.
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GASTRO-INTESTINAL CATARRH.*

By RANDOLPH DADE, Oak Grove.

Feeling my incapacity to come into the presence of practitioners of medicine whose field of experience has been so much broader than mine, and in whom personal contact with disease and its many phases has taught the lessons that I have in a major part learned theoretically at the hands of competent men, as is wont, will not endeavor to discuss my dozens and dozens of cases treated individually with fair success. But, as you are the victims of circumstances, I feel that it is my duty as an incipient physician to annoy you as much as possible in my efforts to be of service to you; so not to deal longer with the preliminaries, will endeavor to give you the gist of the knowledge gained at the feet of those I have learned to love and honor, in conjunction with my limited experience.

*Read before the Christian County Medical Society.

Will invite your attention to an exceedingly common malady, and one that ranks first in causing many individuals to drag through their three score years and ten, the victims of morose, ill-tempered, and a burden to themselves and upon society, when in truth, under proper care, they might have been cheerful, useful citizens. In studying chronic intestinal catarrh we will consider some of the more common causes, for instance we may have the stomach as a primary factor, in the production of intestinal diseases; not only does this improperly functioning stomach exert an important influence over the bowel, but the factor that impaired a once properly functioning organ, may in turn have its deleterious influence upon the intestinal tract, causing it to become diseased.

Improper mastication of food, whether the result of improper oral preparation, or faulty teeth, or further still bolting of food, which I think is one of the major evils of the American people, are common evils. There is no one thing so conducive to a properly functioning digestive system as a thorough mastication of food. Quality and quantity fade into a lazy perspective when we consider hurried eating as a cause for intestinal trouble, certain organic and functional conditions in which the chemie quality of the stomach contents is impaired, a deficiency of hydrochloric acid or hyper-chlorhydria, absence of pepsin, or the stomach may be too active, forcing certain food contents into a bowel improperly prepared for intestinal digestion, or certain characters of food, in abnormal amounts, too much worshipping at the feet of Bacchus, associated with free lunches, hamburgers, and weinerwursts. We must not overlook certain facts, in considering the location of the catarrh, as this may depend largely upon the cause, for instance, of chyle, which is absent in the duodenum, and the jejunum may become innocuous as it makes its passage downward, becoming further diluted by intestinal secretions, or the accumulation of mucous, that has a tendency to protect the mucosa, and render the contents harmless. Or, we may have fermentative changes lower down, where bacteria favor decomposition, which would not result higher up. In considering the colon, unless an abnormal fermentative condition is originating there, with the decomposition of the bowel contents, an absorption of the liquid portion of the feces, resulting in dryness and hardness; this, being long retained, will by its deleterious toxic substances given off and its irritating mechanic action, cause an inflamed condition of the intestine, and the resulting chronic catarrh; would therefore add just here, that constipation is an evil too dangerous to exist, and is a very

common ailment of most individuals, past the age of childhood.

While considering a pathological condition brought about largely by a mechanical irritant, it may be wise to add just here some mechanical characters, causing intestinal catarrh. Among these, we may have congenital or acquired conditions, as torsion, incarceration, invagination, displacement of certain abdominal organs, fixation of specific intestinal coils, all causing an obstruction to a normal blood supply, in this manner bringing about a diseased condition to a once properly functioning organism, or may have conditions such as nervousness, debility, anemia, worry, loss of sleep, want of exercise, all contributing their aid in bringing about this condition; again a chronically diseased appendix may be the exciting cause, or gall bladder disease, heart lesions may be productive of chronic intestinal catarrh. An individual suffering from intestinal catarrh may be the victim of injudicious use of certain deleterious drugs, purgatives in particular, or medicated nutritive enemata, and enemata too hot or too cold, often repeated. Special characters of bacteria, as the streptococci, staphylococci, coccidia, and infusoria, the latter being more common in the tropics, gaining entrance into the system by means of stagnant water. Then the ameba, hookworm, pin worm, and other intestinal parasites, liberating certain toxic substances in the intestinal canal, may cause a chronic inflammation of the mucosa.

As to symptoms and diagnosis, we will consider these under one head. The symptoms are of a disturbed digestive system, with many or all of its associated distressing evils, loss of appetite and weight, gaseous eructations and tympanities; the latter may be a distressing condition, causing the individual much pain and discomfort, by distending the lumen of an inflamed intestine; the weight is usually influenced more in the catarrh of the small intestines, than in the colon, and we have certain nervous phenomena, as insomnia, neurasthenia, melancholia, hallucinations, and palpitation of the heart. The complexion may take on a muddy, sallow hue, the sclera of the eye may become discolored, tongue heavily coated, fetid breath, disagreeable taste in the mouth, sordes on the teeth, alternating constipation and diarrhoea, the latter being followed by marked prostration, this being especially emphasized in children.

A once round faced youngster, the picture of health, whose cheeks would make a rose droop in envy, will rapidly fade into a sight that would soften a heart of stone, the once full face is an expression of pitible suffering and helplessness, pinched cheeks, sunken eyes, muddy skin, hands resembling birds

claws, and the voice the very expression of extreme weakness, and debility. This sad picture may again, like a wilted flower, blossom, after some days or rest from the diarrhoea, permitting the thirsty tissues to absorb the necessary water supply, and regain their natural health tone, to a degree. Pain may be very annoying, of a dull aching character, or sharp and cutting, or again the patient may describe it as burning, as if the bowels were full of hot water; this pain may be around the umbilicus, which is more frequently the case in catarrh of the small intestines, or in the transverse colon. There may be an associated proctitis, which is by no means infrequent, when there is a catarrh of the colon caused by fermentative or chronic substances. Patients may suffer markedly with headache, and backache, which are the result of absorption of certain deleterious toxic substances. The feces may contain large amounts of mucus; this mucus may be incorporated in the fecal bolus, or coating it over, more frequently being the case, when the condition is higher up, and admixture of mucus and feces when the pathology is in the lower intestine. If there is ulceration, blood may be macroscopically present, microscopically we find mucus, blood, pus, undigested food particles, the latter being a good method of determining the progress of the healing process as the case is being treated.

Upon examining the urine large amounts of indican, denoting intestinal fermentation higher up may be found. Microscopically albumen, and casts, and all the phenomena of nephritis, provided the toxins have diseased a once healthy kidney.

Treatment consists in removal of the cause, if some mechanical condition in which surgery can lend its beneficent hand, then surgery. The stomach contents should be as harmless as possible, non-irritating, and easily digested, food that will leave a small amount of residue, and at the same time prove very nourishing. These patients are usually very weak and anemic, therefore concentrated food must be considered. As to the discussion of the chemie properties of the foods, it is too extensive to be considered here, and we must use our judgment, as to the amounts of protein and carbohydrate. Would add that sweets are not usually very well borne, fermenting very easily, and hence irritating the mucous membrane. As to medication, tonics are indicated. arsenic, iron, zinc phosphide, nux vomica, to control nervousness, such antispasmodics as cannibis indica, asafoetida, bromides,—to aid digestion mild digestants may be employed as takadiastase, pepsin, hydrochloric acid, pancreatin. But I prefer to hope for a proper functioning digestive

apparatus, by relieving the catarrh or the cause, and not by drugs, as digestants.

As to constipation and diarrhoea—would not advise purgatives in constipation, they only increase the intestinal peristalsis, and add fuel to the flame, but if we must resort to them, some mild drug as cascara sagrada, olive oil, liquid petroleum, the latter in quantities sufficient for therapeutic results, which will prove non-irritating and very soothing to an already inflamed mucous membrane. For diarrhoea certain drugs as bismuth, chalk mixture, camphorated opium, and others, but I prefer a thorough cleansing of the bowel by means of an enema, using such solutions as a one to two or three-thousands solution of silver nitrate, which can be followed by a retentive enema of ice water, barley or starch water, containing enough tincture of opium, to render the bowel quiescent. Now to the treatment of the bowel itself,—for this I prefer the oil enema, can use the fine cottonseed oil, or olive oil, the latter however, is very expensive, and many patients may not be able to afford it. This should be introduced into the bowel at bedtime, with patient in the left lateral position, or dorsal decubitus, or Simm's position, permitting the oil to flow slowly into the bowel. In from one to sixteen ounce quantities according to age and ability to retain, this oil will render the bowel soft and pliable, causing a peeling off of the intestinal contents, and will be carried high into the intestine, by capillary attraction as oil is carried upward in the wick of a lamp. This must be kept up as long as there are symptoms of intestinal indigestion, or fermentation.

Repeatedly examining the feces microscopically as your control in the treatment of a disease with your associated symptoms. As improvement comes on your reduce your enema, in frequency to every other night, continuing for several weeks, finally leaving off entirely as your end results prove satisfactory. If a proctitis is an associated evil, can use sedative suppositories, you will find that a daily painting of the anal canal with a ten per cent solution of argyrol will give happy results. As to prophylaxis, plenty of fresh air, moderate exercise, sunshine and cheery surroundings, all this coupled with persistence and attention should give you encouraging results

Tissue Cultures in Investigation of Cancer.—

As the result of his own studies, Lambert is inclined to endorse the view that the cancer cell is a cell of relatively low resistance and that malignancy is to be attributed entirely to the capacity of the cells for unlimited growth.

NEWS ITEMS AND COMMENTS

Dr. and Mrs. E. M. Brown, of Georgetown are guests at the Martinsville. Dr. Brown has a number of friends in that city with whom he is renewing acquaintances.

Dr. D. C. Curry, State Board of Health officer of Bowling Green, was in Harlan August 11, and after the show at the Presbyterian church that night gave an important lecture on Health and Hygiene. He presented the illustrations on the screen and together with explanations the lecture was very interesting and instructive. He explained definitely the cause of typhoid, hookworm, tuberculosis and consumption, and urged the County Board of Health to be more strict on unsanitary conditions. Dr. Curry also warned the audience of the danger of drinking water from surface wells. Especially did he urge the fight against soda fountains and public drinking places that do not sterilize their glasses.

He expects to pay Harlan another visit in the near future.

Dr. John Mullen of Lexington, held a clinic at Morehead, September 15th and 16th for the treatment of trachoma. Every one, especially children, afflicted with granulated eyelids or sore eyes were urged to call on Dr. Mullen. Operation and treatment free, as the Doctor is paid by the Government. All were urged to remember the date and have their eyes or those of their children treated, as much pain and future trouble can be avoided.

At a mass meeting of citizens held at the Tabernacle, with the Rev. J. N. Jessup presiding, the Christian County Public Health and Welfare League was organized with the following officers: President, Ed L. Weathers; first vice president, Dr. J. E. Stone; second vice president, Dr. J. B. Jackson; secretary, Mrs. N. H. Fentress; treasurer, Bailey Russell. The president named the following Executive Council: Mrs. F. K. Yost, Miss Katie McDaniel, Mrs. George Kolb, James West, Charles F. Johnson, Mrs. R. M. Woolbridge, Mrs. B. D. Hill, Mrs. V. L. Gates, L. E. Foster, Mrs. L. Hisgen, Miss Minnie Pyle, Miss Fannie Phelps, Mrs. M. J. Lowenthal and Mrs. Georgia Clark. Interesting addresses were made by Miss Marian Williamson, of the State Tuberculosis Commission, and Mrs. Marian Sager, the resident nurse.

The Mayfield Medical Society, organized by the physicians of Mayfield, has adopted resolutions to the effect that persons who are able to pay doctor bills and refuse to pay them, hereafter will not be attended by the members of this society. They suggest that it is cheaper to pay cash for the visits and operations. The society

gave as a reason for the new rules the increased cost of living and expenses.

Faithful and honorable in every act of his long and useful life, never faltering at any duty, always willing to respond to any summons or aid that was reasonable, Dr. A. W. Brasher, who is now 86 years of age, sits calmly and serenely in the evening of life clad with the happy and peaceful thought that he has lived a life that has been spent in doing all he could for his fellowman and aiding the unfortunate whenever and wherever he could.

Dr. Brasher is now a resident of Madisonville, where he has spent many years of his long existence, and during all of his residence there lived in such manner that he has been most highly respected and honored by every one. He has innumerable friends all over Hopkins county and this section of the state who will be glad to learn of his present good health and condition.

Dr. Brasher served as prison physician at the Eddyville penitentiary from 1898 to 1906, and while in this position made a model official and left the institution with a splendid record. He was at one time engaged in the drug business in Madisonville. He was actively engaged in the practice of medicine for over 40 years, and during this long period was one of the leading physicians in this section of the state.

May the remaining days of this good, venerable gentleman be as tranquil as a babbling brook in the springtime, and when the end of his noble life shall come, may he be permitted to pass into his reward like an innocent child into summer.

The Pulaski Medical Society held their regular monthly meeting at Dr. Parker's office on Thursday, August 16, 1916. The following were present: Drs. M. M. Price, of Dabney; A. W. Cain, S. G. Cain, J. A. Boland, S. F. Parker, F. A. Taylor, Carl Norfleet and W. R. Alexander, of this city. Some clinical cases were reported and discussed. No papers were prepared for this meeting. General discussions were given along the professional lines.

Dr. W. G. Lindle, of Sturgis, died from the results of a fall August 9. He was the son of J. W. Lindle, an old pioneer settler of Union County.

Dr. Lindle was one of the best known physicians in Sturgis and was a graduate of State Normal College at Valparaiso Indiana, Kentucky School of Medicine Louisville, Johns Hopkins University at Baltimore, Md. Jefferson at Philadelphia, and post-graduate of Polyclinic, New York, and also took a course in Cincinnati. He was considered the best read physician in Union County. He was one of the best beloved men in Western Kentucky.

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NEXT MEETING STATE ASSOCIATION.
HOPKINSVILLE, OCT. 24, 25, 26, 27, 1916

COUNTY SOCIETY REPORTS

Russell—The Russell County Medical Society met in regular session at Russell Springs, August 12, with a fairly good attendance of doctors and the laity. The heavy rains the night before made the dirt roads so muddy that quite a number were prevented from attending.

The meeting was called to order at 10 A. M. by President Dr. Hammond. Dr. Combest read the 1st Psalm after which prayer was offered by Rev. Breeding. The Address of Welcome was then delivered by Dr. Combest and responded to by Dr. L. P. Hammond. The remainder of the forenoon was taken up with the clinic, which was large and interesting.

The society was greatly pleased upon the arrival at noon of Dr. R. C. McChord, Dr. Kobert,, of Lebanon; Dr. Hancock, Cane Valley; Drs. Cain and Bolin, Somerset.

After dinner an interesting paper was read by Dr. Kobert on "Public Health" which was very interesting. He stated in his paper that when the public schools opened in Marion county that every child and teacher would have been successfully vaccinated and that fly-proof closets for the school houses would have been supplied.

This paper was discussed by all the members present.

R. C. McChord's paper on "The Passing of the Old Family Physician" was warmly received. He also lambasted fee-splitting or selling of patients and the so-called specialist without first being a first class general practitioner. The paper was an excellent one and was discussed by all.

A. W. Cain made a general talk to the society.

L. D. Hammond read a paper, "Why A Medical Society?" which was listened to by all with much interest as it was one of the best ever heard or read. The members congratulated Dr. Hammond on his paper and requested that it be published in the Journal.

The doctors present were: A. W. Cain and J. A. Bolin, Somerset; R. C. McChord and Kobert, Lebanon; L. D. Hammond, Irvinston; Flanagan and Rowe, Jamestown; Blair and Combest, Russell Springs; Hancock, Cane Valley; J. B. Scholl, Jabez.

As it was getting late, or well along toward time to do up the night work and milk, the society adjourned to meet the first of September with a big public health meeting at Old Friendship church house or some other good place to be announced later by L. D. Hammond.

J. B. SCHOLL, Secretary.

Hardin—The Hardin County Medical Society met August 10th at the office of Dr. Mobley with the following members present: Drs. Mobley, English, Layman, Rack, Rogers, O'Conner, Strickler, Allen and Alvey.

The meeting was called to order by the presi-

dent, M. S. Allen. The minutes of the previous meeting were read and approved.

Application for membership was made by J. H. Rock and by unanimous vote of the members present Dr. Rock was made a member of the society.

R. T. Layman reported a case of a child which he saw in consultation with Dr. McPherson. The child on the first day of the illness vomited a fluid which had the appearance of very thick green paint. The child had a temperature ranging from 99 to 102. He said he had never seen a case just like this and was undecided as to the diagnosis.

J. W. O'Connor, C. W. Rogers and J. W. English discussed the case and the opinion was that the symptoms indicated either typhoid fever or gastritis, the treatment given in the case was elimination and supportive.

R. T. Layman reported a case of water dog in the stomach of a man, the case had been treated for quite a while for stomach trouble without any results and the patient was finally put on arsenic for the tonic effect and in a short time the waterdog was expelled from the stomach dead, and the opinion was that the arsenic poisoned the waterdog and caused it to be expelled from the stomach.

J. M. English reported a case of a child with cholicey pains in the stomach and bowels which he was unable to relieve for several days but after repeated doses of oil the child finally passed a number of buttons and was relieved from any further pains.

J. W. O'Connor reported a case in which the patient had a large bone in the stomach and the bone was of such shape that the doctor did not understand how it could have been swallowed.

M. S. Allen reported a case of squirrel bone in the stomach and also a case of feeble-minded person in which a number of nails and spoons had been swallowed and which were found in the stomach upon post-mortem examination.

C. W. Rogers reported a case of a lady twenty years of age that complained of soreness in the bowels which indicated appendicitis and was advised that an operation might be necessary, but medical treatment was given with the result that she passed a number of small stones and it was learned later that she had been eating these stones for the purpose of curing some ailment that she had and that some of her friends had told her the stones would cure. She had no further trouble after passing the stones.

J. W. O'Connor reported that he had seen an unusual number of cases of neuralgia and rheumatism at that particular time and asked the society for information as to the cause of so much of this trouble at that special time.

J. M. English, R. T. Layman, M. S. Allen, C. W. Rogers and J. C. Mobley discussed the case. It was thought that at that time an increase in

this trouble may be due to certain vegetables and fruits.

J. C. Mobley was of the opinion that most all rheumatism came from some focal infection. Nothing new was offered in the way of treatment.

C. W. Rogers reported good results from the salicylates given in 100 grain quantities per day.

J. W. O'Connor reported a case of a lady 45 years of age complaining of dizziness, it was difficult for her to sit up or to walk straight on account of the dizziness. She also had partial paralysis of one side of the face. He asked for suggestions as to the diagnosis.

F. P. Strickler, J. M. English and C. W. Rogers discussed the case and suggested that a Wasserman should be an aid to diagnosis.

The essayist also reported a case of a man injured by being caught by a belt on a threshing machine, the injuries were on the head without fracture of the skull; there was loss of consciousness which had lasted for two or three weeks, but at that time the patient had improved until he could recognize members of his family.

C. W. Rogers wanted to know of the society if the case was one of concussion or compression, and what would be the prognosis in the case. He also reported a case of wart on the lip of a patient which appeared to be developing into cancer, the growth was being treated with nitrate of silver and kept under observation. No further business the society adjourned.

W. F. ALVEY, Secretary.

Eagle Valley—The Eagle Valley Medical Society met at Sandes, August 9th, 1916.

The meeting was called to order by Dr. Threlkeld. Minutes of the last meeting read and approved.

W. I. Hume, of Louisville, and Drs. Hoffman and Shinkle, of Cincinnati, Ohio, were elected to membership.

J. Edward Pirrung, of Cincinnati, read a paper on "Fracture of the Upper End of the Femur."

It is his custom to check up all his cases by the X-ray and should be treated in a well-equipped hospital when possible. Also both limbs should be placed in abduction by placing a sand bag or pillows between the limbs. And he dwelt upon the point that we should not try and get crepitus in these cases.

A. D. Willmoth and George Purdy discussed this paper.

C. E. Skinkle, of Cincinnati, read a paper on "Cord Localization," illustrated by drawings, showing the origin of the nerve supply of different parts of the body and their function and what symptoms injury to certain parts of the nerve tract would produce. This was a very instructive paper and a treat to the society, proving that the writer had given it a great deal of study. Dr. Wendell complimented the writer very highly, saying that he had never heard a better paper read before any society.

John R. Wathen, of Louisville, read a paper on "Some Observations on Gall Bladder Surgery." This paper was illustrated by drawings and was very interesting and was full of food, thought and facts. Showing the writer was well acquainted with his subject gained by experience and sound judgment. Dr. Wathen says that stones will be overlooked if the hepatic and common ducts are not explored and in every case he makes it a rule to explore these ducts.

A. D. Willmoth and J. E. Pirrung discussed this paper.

A. O. Pfingst read a paper on "Emergencies Seen by the Eye, Nose and Ear Men." This was an instructive paper enjoyed by all. The general practitioner could afford to go miles to hear this paper as it shows what damage could be done by inexperienced men trying to remove foreign bodies from the ear, nose and throat and that it was bad practice to try and wash a bean out of the ear for this bean might swell and cause the ear drum to rupture.

G. C. Hall and S. L. Cockran discussed this paper.

J. T. Wendell read a paper on "Modern Treatment of Syphilis." This paper was enjoyed by all and was delivered in that pleasing mode that is characteristic of the writer. From the number of questions that was asked Dr. Wendell and by the prompt replies showed he had unlimited knowledge of this subject.

A. O. Pfingst and J. R. Wathen discussed this paper.

W. I. Hume read a paper on "Local Anesthesia." This was a timely paper as well as instructive. He says that it may truthfully be said that almost all surgical procedures are possible of accomplishment by the use of local anesthesia. The range of practical use is determined by each individual operator for himself.

Discussed by **Bernard Asman, A. D. Willmoth and J. T. Wendell**.

Motion made by Dr. Purdy and seconded by Dr. Brown, that the society adjourn to meet again November the first. Motion carried.

ALLEN DONALDSON, Secretary.

BOOK REVIEWS

Obstetrics, Normal and Operative—By Geo. Peaslee Shears, B. S., M. D., New York Polyclinic Medical School and Hospital, etc. J. B. Lippincott & Co., Philadelphia and London. Price \$6.00.

It is a pleasure to review this new work. Although the author confesses it to be to some extent a compilation and acknowledges his indebtedness to others, yet it bears the impress of individuality and is written in a readable style that reminds one of the former masters of the art of teaching. The book is of generous size, yet not so formidable as to be unwieldy. This desirable

result is achieved by leaving out much unnecessary matter that encumbers many larger works. Dr. Shears writes with all the authority of experience and it appears to us that he has produced a working text book that will be a favorite with all who practice and study the art of obstetrics.

The Medical Clinics of Chicago.—Volume I, Numbers V. and VI. Volume II, Number I. Octavos of about 230 pages each, illustrated. Philadelphia. W. B. Saunders Company, 1916. Published Bi-Monthly. Price per year: Paper, \$8.00; Cloth, \$12.00.

These three numbers are a continuation of this excellent new series of clinical papers and reports. While it is impossible to give a list of the entire contents the subscriber can be assured that they represent the very best and foremost authorities in a city noted for medical education. The busy, stay-at-home practitioner will find in them a complete post-graduate course in medicine.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago.—Volume V, Numbers I and II (February and April, 1916). Octavo of about 180 pages each, illustrated. Philadelphia: W. B. Saunders Company, 1916. Published Bi-Monthly. Price per year. Paper, \$8.00; Cloth, \$12.00.

As the reviewer writes these lines the news is being printed throughout the world that John B. Murphy is dead. A great surgeon, a great teacher, a great man, and modest and unassuming as the really great are. Those who know the man whose clinics are recorded here will visualize him as they read his terse comment, illuminating that which would be hidden from many, directing attention to every essential with neither word nor effort wasted on the unessential. Many medical teachers would do well to achieve Dr. Murphy's literary skill as well as his surgical ability.

International Clinics.—Volumes I and II. Twenty-sixth series. 1916. J. B. Lippincott & Co., Philadelphia. \$2.00 each.

As so often emphasized in these columns the busy doctor needs to subscribe to clinical reports if he is to keep up with medical progress and can not take time to attend the clinics themselves. Among so many noteworthy contributions from all sections of the country it would be unfair to mention any one as being of more value than another. Each special field has one or more articles of interest. The general excellence of the International Clinics, both in binding and illustrations as well as the comprehension scope of the contents make them an especially desirable acquisition to a medical library.

The Basis of Symptoms—By Dr. Ludolph

Krehl. Third American Edition, translated from the seventh German Edition by Arthur Frederic Beifeld, Ph. B. M. D. The J. B. Lippincott Co., Philadelphia Price \$5.00

Not merely a treatise on pathology, as its German name might indicate, but a scholarly analysis of the physiologic facts underlying depraved functions that express themselves to the clinician as symptoms. As an aid to interpreting symptoms in terms of pathology, which is the route the physician must follow at the bedside, it is of value. Several new chapters are added, notably that on Infection and Immunity. The bibliography is extensive. The method of emphasizing certain passages by double spacing the letters thereof does not accomplish its purpose nor does it make for easy persual of the text.

Practical Medical Series.—Volume I, General Medicine, by Frank Billings, M. S., M. D.; Volume II, General Surgery, by John B. Murphy, M. D.; Volume III Eye, Ear, Nose and Throat, by Wood, Andrews and Shambaugh.

Each year we have reviewed this excellent series and the present ones promise to keep up the traditions of their predecessors. A complete file of the series from year to year would make an excellent review of the progress of medical science and if properly indexed would be invaluable. We are glad to note that there has been an improvement in this respect over some years ago. Many valuable references have been lost because of a lack of thorough cross indexing.

Ten volumes are issued yearly and the price is \$10.00 for the series, although single volumes single volumes can be bought separately.

THE FORUM

IN MEMORIAM

To Joshua Taylor Wesley, Middleburg,, Casey County, Kentucky by William Lane Lowder, 420 North Mill Street, Tipton, Indiana.

Ever the robin, on days like these of sunlit June,

Sings to the slumb'ring dead, as leafy shadows veer,

Swung by the slow decline of peaceful afternoon;

The Dead: the Lov'd and Lost, do not hear.

There goes the unmeaning ages as the hours:
Absolved by Time, they reckon not his flight.
Compassionately starred by lowly flowers,
On Mother Earth, lies an unlifting night.

They are silent made in a silent place,
Abiding past our gratitude and beyond our tears;

Nor shall our music touch with choral grace
Their dreamless sleep's unnoted years.

Better, perhaps, no voice inopportune
Deliver up the bourn of their repose
The certain and immutable, "Too Late"
The human heart—no living heart but knows.

Yet there, of those who lie so dreamless now,
Sleeps one whose love I knew in seasons past:

O warden of my earliest dreams O thou
I longingly, lovingly, reckon what at last.

How should a youth, conscious be of such
A heedless boy have gratitude? Ah, yes
care?

Yet still the heart of Memory makes aware,
Sad thoughts for old thanklessness.

And now, to have thee know the full regret
For thanks unfelt, undreamt-of, and unsaid
Elder and lesson'ed, now our eyes are wet
Above the green-thatch'd grave of the gentle dead.

L'ENVOY.

There's a stone to tell where thou dost sleep:
O one-time watcher by the bedside, lone sentinel

Of long-gone midnights, desolate and deep,
I know thou slumberest sweet, thou slumberest well.

TO THE EDITOR:

In your editorial concerning the Annual meeting you say: "It will be noted that there are fewer papers than usual and *ampler* time will be given for discussion." Whoever is responsible for this should be congratulated and the same should be considered whenever the program is made out. It should be obligatory upon the State Society to see that this is done. There has been much comment upon this. The last two papers that I read before the society—and special attention was given to these papers to bring out discussion—the president stated, as there is not time we will have no discussion. The next on program is Dr. So and So.

This takes the heart out of any physician and I have heard many say that they did not care to take the time, etc., to prepare and read a paper because of this.

I again congratulate whoever is responsible.

Yours very truly,
WALKER B. GOSSETT.

Sept. 7th, 1916.

Error Corrected.—In a report of the proceedings of the July meeting of the Barren County Medical Society Dr. C. C. Turner's name was signed as secretary. This report should have been signed by Dr. J. Morgan Taylor, who is the Secretary.

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EDITORIAL

AT HOPKINSVILLE.

The Hopkinsville meeting has gone into the history of Kentucky medicine as one of the most complete and profitable that has ever been held in the State. The scientific program was entirely filled by the Kentucky doctors, and there was not a single paper read which did not hold the attention and interest of those in attendance. More members participated in the discussions than in any two previous meetings.

The Oration in Medicine, delivered by Dr. Stevens, of Mayfield, on "The Future of the Medical Profession in Kentucky," is published in this issue and will compel the thoughtful interest not only of every physician in Kentucky but of every student interested in the welfare of the Commonwealth. Dr. Stevens traversed the continent in the studies which led to the preparation of this address, and we are confident that it will profoundly affect the future of medicine, not only in Kentucky but in the entire country. From time to time during the coming twelve months we expect to consider editorially different sections of the address, and we will be glad to publish in our columns comments from any of our members or societies on it.

The Oration in Surgery by Dr. Gambill, of Jenkins, on "Then and Now in Surgery," was a mountain product from beginning to end. We have never listened to more beautiful word pictures, and every one present participated in the pride that Dr. Gambill so beautifully expressed in the achievements of the splendid men who represent medicine in Eastern Kentucky. In a broader sense Dr. Gambill showed a familiarity with the whole history of medicine, and his oration was really a prose poem in its delivery and beauty. We trust particularly that every young man in the profession will read it and familiarize himself with it, as it will be a constant inspiration of the highest endeavor.

Hopkinsville lived fully up to its reputation for generous hospitality. Every member of the Christian County Medical Society seemed to be constantly on the job, and a noteworthy innovation in the conduct of the medical meeting was the constant presence at the registration desk of a bevy of the beautiful wives of the Hopkinsville doctors who omitted no effort to make every one feel at home.

Without making any invidious distinction, the JOURNAL desires to express an especial obligation to Dr. Frank Stites for the data from which the Hopkinsville number was compiled and for much other valuable assistance in making the meeting such a notable success.

The full proceedings of the House of Delegates will appear in the December issue and will be read with much interest.

OUR STATE OFFICERS.

At the preliminary meeting of the Council Dr. Milton Board, of Louisville, was elected President-elect to fill the vacancy caused by the death of Dr. Ap Morgan Vance. It is unnecessary to tell the profession of Kentucky who Dr. Board is. His long and effective services as a state official and his constant association with everything that is best in Kentucky medicine has made every one familiar with him. Dr. Board was qualified, as most successful physicians are, by several years of hard country practice in Breckinridge county. He left Hardinsburg to become the superintendent of the State Hospital for the Insane at Hopkinsville, and his work there was so effective that he was promoted by Governor Beckham to membership on the State Board of Control for Charitable Institutions. When he had retired from this position, he opened a private sanitarium for nervous and mental diseases in Louisville. Two years ago, he succeeded the late Dr. Wm. H. Wathen as medical referee of Jefferson County; and, at the same time, became Registrar of Vital Statistics for the city of Louisville. His effectiveness was recognized by the National pro-

fession and he was appointed by the late President Rodman as a member of the Council on Health and Public Instruction of the American Medical Association, one of the most important of their offices in the National Body. Dr. Board has officially been a Vice President of the State Association and has twice been elected a delegate to the American Medical Association. He has always been a man of decided convictions and yet has retained the respect and confidence of those who opposed him. He presided with spirit and dignity at Hopkinsville and much of the success of the meeting was due to his effectiveness. During the coming year Dr. Board will be an active President. He is now Medical Director of the Workman's Compensation Board and in this position, he will be constantly in the service of the whole profession.

The President-Elect is Dr. Phil. H. Stewart of Paducah. Dr. Stewart is one of the most distinguished surgeons Kentucky has produced. He has been orator in surgery and Vice President of the State Association, and has filled the various offices in his county society and in the splendid Southwestern District Society. Dr. Stewart will be Chairman of the Committee on Scientific work for the Ashland meeting and has already begun the preparation of the program. He is a born diplomat, has a charming personality and the profession is to be congratulated on his choice as a leader.

Dr. Gaither of Hopkinsville, was elected to the Vice Presidency as a reward for the splendid scientific program he had provided for the Hopkinsville meeting. Dr. A. S. Brady, of Greenup, was the retiring Councilor from the Ninth District and was rewarded for his effective work by elevation to the Vice Presidency. Every doctor in Western Kentucky knows and loves Dr. Ben P. Earle and were glad to commend him to the profession of the balance of the State by his elevation to the Vice Presidency also.

Drs. D. M. Griffith, of Owensboro, and J. W. Kincaid, of Catlettsburg were elected to the Council. Every doctor in Kentucky will be glad of this, as these two ex-Presidents have performed such notable services that it would not seem right for them to be out of harness even temporarily. Dr. Rau retired as Chairman of the Council on account of the increasing demands made upon him by a busy practice after many years of efficient service and was succeeded as Councilor of the Third District by Dr. J. N. McCormack, who needs no introduction, and as Chairman of the Council by Dr. R. C. McChord, of Lebanon, whose experience and standing eminently qualify him for this most responsible position.

The next meeting place will be in Ashland in many respects the most delightful city in Kentucky. Most of the 436 men who were present at Hopkinsville will go to Ashland and we confidently expect many others from Eastern Kentucky to also be present.

The Hopkinsville meeting was the most successful one yet held by the Kentucky State Medical Association. It is up to all of us to make the one at Ashland even better.

DR. JOHN B. MURPHY.

Dr. John B. Murphy was born in Appleton, Wisconsin, December 21, 1857, and died at his summer home in Michigan on August 11, 1916.

After graduating from the Rush Medical College in 1879, Dr. Murphy served as an interne in Cook County Hospital. In 1882 he went to Europe for a post-graduate course. He was fortunate in coming under the influence of Billroth and Albert, the former the most famous clinician, the latter probably the best surgical diagnostician of that day. In 1884 he was appointed lecturer in surgery in Rush Medical College, and in 1892 he was made professor of clinical surgery in the College of Physicians and Surgeons, and in 1901, Professor of Surgery in Northwestern University Medical School, in which capacity he continued until his death.

In the reorganization of Mercy Hospital in 1895, Dr. Murphy was made chief of the surgical staff. For many years he had been consulting surgeon for a number of the prominent Chicago hospitals. He was a member of practically every medical organization to which he was eligible, and every honor possible had been conferred upon him by his confreres in the profession, including the Presidency of the American Medical Association.

In Dr. Murphy's death the profession and the world loses not only its greatest clinical teacher of surgery, but also one of the very few of its great medical statesmen.

No one who ever came under the spell of his matchless clinical oratory will ever forget it. His diagnostic intuition seemed almost superhuman, and yet he rigidly availed himself of every aid—laboratory or physical—to confirm or deny his personal impressions. A master of technique, he naturally simplified procedures in every branch of the art with which he came in contact. His progressive enthusiasm for better work and higher ideals

was contagious, and no one ever came in contact with him without feeling more respect for the profession of medicine, of which he was so able an exponent.

It seems almost impossible that such a master and leader in his own special branch of the profession could have had the broad knowledge and attainment in all the problems that affected it in its relation to the public which Dr. Murphy exhibited in his every public utterance. His address as President of the American Medical Association was probably the most practical that has ever been delivered. No other of our leaders, except Dr. Billings, has ever had such a grasp on the national aspect of public health problems that he had. Had it not been for treason in the high councils of the American Medical Association, his incumbency of the presidency would have witnessed the realization of the dream of far-seeing medical men, ever since the foundation of the republic, of a secretary of health with consequent organizations which would have enabled the United States to take its proper stand amongst the nations in the safe-guarding of the health and lives of its people. Dr. Murphy's transcendent qualities of leadership naturally aroused intense jealousies amongst men of lesser caliber, and the serenity with which he contemplated the snarlings and snappings of these little fellows was indicative of the largeness of his own soul and the greatness of his character.

During his last few years he devoted a great deal of his time and energy to the foundation of the College of Surgeons, and, while this organization will always be representative of American surgeons, every one who knows about its earlier history will feel that it is a practical realization of the ideals of Dr. Murphy.

In his energy, his grasp of great problems, his technique, his manliness, his gentleness, his leadership, in speaking of all that would make a great medical statesman, we feel that we have said far too little in expressing the appreciation the medical profession of Kentucky felt for this great man, who has honored us by not only becoming an honorary member of our State Association, but who frequently came to our meetings and helped us to higher planes of professional endeavor. If in this respect our words fall short, how can we express ourselves when we attempt to bear tribute to his unswerving loyalty and his intense friendship? He was the truest and kindest of friends; of the best and bravest of men, a devoted husband and father; a loss to all who knew him and to all the world besides.

SCIENTIFIC EDITORIALS.

SPIDER BITES.

It is not unusual in our practice to be consulted in regard to insect-bites. About a year ago we saw a case which had baffled several physicians, a case of dermatitis due to the harvest-bug or mower's mite, the *Leptus Autumnalis*. Anyone who has ventured among blackberry briars and acquired a crop of "chiggers" can testify as to the amount of disturbance they can produce, while it is not unusual to see extensive oedema and intense itching for several inches around a mosquito bite. Nor are there merely local skin symptoms, for often considerable constitutional symptoms are present.

More poisonous than any of the insects mentioned above and more apt to produce constitutional symptoms is the bite of the spider. Many of us have met with cases almost like erysipelas caused by spider bites.

Among the spiders whose bites are poisonous belong different species of *Segestria*, *Lycosa*, *Xysticus*, *Filistata*, *Polybetes*, *Aranca Audax*, *Latrodectus* (in Argentina), *Avicularia*, *Mygola*, *Dendryphyartes*, *Dysdera*, *Sicarius* and *Lycosa Tarantula*. Some are more poisonous than others; the *Latrodectus tredecimguttatus* of the lower Volga in Russia is said to kill scores of thousands of cattle annually, about 12 per cent of the animals who have been bitten dying therefrom. The spider's poison apparatus consists of two long pouches, lying in the thorax, one on each side, and emptying at the apex of the jaws. However, besides the poison in the pouches, the venom is distributed throughout the spider's body and even in the eggs. At mating time the bite of a spider is more poisonous than at other times. The poison is somewhat similar to snake-poison, being protein in nature, and destroyed by heating to 70 degrees C. for 40 minutes or at 60 degrees C., for a longer period. It contains a powerfully hemolytic substance, arachnolysin, and agglutinin and a neurotoxin. Sachs was able to produce an antitoxin for the spider toxin.

As we would expect from our knowledge of the venom its main constitutional clinical effect is on the nervous system, heart and blood, though this may be slight when a human is bitten by one of the less poisonous forms. The clinical picture may appear as a cutaneo-ictero-hemolytic complex, as an exanthema, or as a neuro-myopathic disturbance. After a spider-bite a small double perforation of the skin is left, after which a petechia appears with an oedematous inflammatory reaction; a phlyctenule or blister may form, like in plain herpes or herpes zoster; the central portion darkens, the periphery usually remaining hyperemic and swollen with the

lymph channels widely distended with serum; the lymph-channels may be involved for some distance, even develop into a real linear lymphangitis. As a rule there is an extravasation of blood around the bite, changing in color, as this is gradually absorbed, from a dark purple, through blue, greenish-yellow, and light yellow. Sometimes the center becomes necrotic, so that the area looks like a primary syphilitic sore.

Constitutional symptoms may appear at once or be delayed several hours or even a couple of days, and varies considerably in severity. There may be a rise of temperature, as high as 104 degrees, pulse rate up to 120, respiration to 75; sometimes there is cardiac spasm and arrhythmia; the tongue may be heavily coated; there may be gastric pains, even spasms, nausea, vomiting, frequently bloody and mixed with bile, and constipation or bloody diarrhea.

The effect of the neurotoxin may be manifest as a general weakness, radiating pains in the region of the injury, headache, chills, delirium, hallucinations, fear, disturbance of vision, even blindness and deafness.

The hemolysin causes the appearance of hemoglobin in the blood and decrease of erythrocytes; hyperleucocytosis is the rule. The blood itself is dark, full of yellow pigments, and coagulates very slowly. There is often pain over the kidneys and oliguria and anuria; the urine is albuminous, highly colored with yellow pigments, hemoglobin and erythrocytes, and may contain casts or cylinders; the urea is usually decreased. The liver is enlarged and tender. There is free secretion of sweat, saliva and tears.

Especially after tarantula bites are apt to occur radiating pains, numbness, asthenia, spasm of the throat, dyspnea, tremor and tonic and clonic convulsions; also gastric pain, dizziness, insomnia, delirium, increase in the patellar reflexes, profuse sweating, bladder or bowel tenesmus, priapism, loss of appetite, brady cardia and high blood pressure.

It is seldom that a spider bite ends fatally. The sooner the constitutional symptoms appear the graver the prognosis.

In making a diagnosis care should be taken not to confuse it with the bite of other insects or snakes, nor with the infections, such as erysipelas, syphilis, pustula maligna (anthrax) or mycotic infections.

The treatment is rather simple. Withdrawal of as much of the poison as possible if seen immediately after the bite by suction, applications of mild solutions of potassium permanganate externally and caffeine and digitalis internally. In case of threatened collapse intravenous injections of physiological saline solution is indicated.

M. L. RAVITCH and S. A. STEINBERG.

ORATION IN MEDICINE

THE FUTURE OF THE MEDICAL PROFESSION IN KENTUCKY.*

By E. A. STEVENS, Mayfield.

The history of the medical profession of Kentucky for the last twenty years is familiar to all of us, and with most of us it is but a matter of memory. We do not have to go to the printed page to find it, for we have lived through it. During this period the doctor's life has been made easier in some respects, notably in ease of transportation, but in most respects it is more exacting, and while the average life of the civilized being is increasing in its number of days, by reason of the labor of our profession it is doubtful if the doctor is reaping like benefit from this part of his work. More and more is expected of him. He has more to learn which takes more time for preparation, and after he begins, his equipment must be better in every way and a higher standard must be reached and maintained; consequently he must work under higher pressure, which, in many conditions, reaches above the level of safety first.

It seems impossible for the score of years that is just in front of us to be so prolific of change as has been the one just passed. At the beginning of the period mentioned, doctors were too numerous for their good, the quality was not as good as it should have been and their increase was rapid; medical schools abounded and diplomas were issued while you wait, all of which was injurious to the morale of the medical profession. When the wave of reform began it met much of its opposition from the medical colleges of the better class. Some of the officials of the medical colleges feared the centralizing effects of the movement and all that is necessary to see that their fears were not groundless is to look over the Educational Number of *The Journal of the American Medical Association* for August 19, 1916. Look at its effects on the medical schools of Louisville, of which many of us are alumni. The colleges with large endowments or with revenue from the state or city are the only ones that are not suffering from loss of patronage and consequent loss of income. It has put many of them out of business, and bankruptcy is staring others in the face. In most respects their reduction has been beneficial, but there is a chance that the pendulum may swing too far to the other side for the good of all concerned. Where these schools are needed and are in financial distress, they should be assisted by the city, the state or by charitable endowments.

I do not wish to assume the role of the

*Read before the Kentucky State Medical Association, Hopkinsville, October 24-27, 1916.

prophet, but "Coming events cast their shadows before," and it requires but little powers of observation to see the result of this campaign if pushed too far. There has been a great deal written by members of the medical profession during the last two years regarding the diminished output of doctors. I do not think that any doctor could have read the article by Dr. Gordon Wilson on "Medical Education with Reference to Rural Communities" without feeling the necessity of making some change in our requirements to practice in rural communities, or else make it more attractive as a home for the young doctor.

The lowest requirements of any acceptable medical college at the present time for entrance are four years in high school and one year in a literary college. About half of the medical colleges require two years in an acceptable literary college and the other half will require it by 1918. No medical college will be acceptable to those in authority after 1918 that does not require two years in a literary college as a primary qualification. There is no question but the graduates of schools of high requirements average far above those whose preliminary education is poor. This would be well if it would supply a sufficient number of graduates for the legitimate demands for doctors and distribute them to the places in which they are needed. Will it do that? We have the statistics furnished by *The Journal of the American Medical Association* as follows: The highest number of medical graduates this country has ever had was in 1904, when there were 5,747. Since that time the number of graduates annually has declined, till this year there were 3,518, a reduction of nearly forty per cent., while the total enrollment dropped from 28,142 in 1904 to 1422 in 1916 which is less than half the number enrolled in 1904, and less than at any time since 1890, having dropped 869 since last year, the only increase being two hundred in first year men over 1915.

I doubt if the lowest level has yet been reached for the requirements continue to advance till 1918, when the authorities promise us the limit will have been reached as far as they are concerned. From some sources there is a demand for a college graduate for preliminary qualification, and the only reason that one year of internship is not added to the curriculum is that the faculties of some of the medical colleges are not in possession of enough hospital buildings and clinical material to supply places for all the graduates, and they think that non-school hospitals do not possess a staff of sufficient ability to justify the student in spending a year under their tutelage. However, four states will require one year spent in a hospital by 1918 before they will allow their Boards of Health to is-

sue a license to practice medicine inside their borders. My authority for this statement is Dr. James Ewing, of New York City, in the *Journal of the American Medical Association*, August 21, 1915.

If we have reached the lowest point of supply, possibly the country can get along with it for this will be compensated, to a certain extent, by the lessened amount of sickness due to the ever increasing knowledge of the cause and prevention of disease. The education of the people is having a marked effect in reducing sickness in the state of Kentucky as the report of the State Board of Health plainly shows. Improved roads and the automobile will enable each doctor to cover more territory than he has been covering. After making allowance for all this, it seems doubtful if the rural community will be supplied as it has been. I doubt if a growing country can be supplied with such a diminished output where so large a per cent. of its population is rural. The state of Kentucky, at the last census, has over three-fourths of its population living in rural communities; so it is not the small minority of the people to be considered, but the great body of the people of Kentucky.

Not only will the number be insufficient, but will a man who has spent this amount of time in preparation for practice and who has acquired the tastes of an educated man and learned the attractions of city life, and possibly acquired a wife with some tastes of her own, be willing to go to the country or the small town to spend his life in one of the most arduous callings, living a hard life if he gets a good practice, and a harder one if he does not—a life where the wife must make up her mind either to starve or be neglected? The answer we usually get to this question from those higher up is, "Well, they are doing it." Referring again to Dr. Wilson's article, he indicates that they are not doing so. He has taken the trouble to look up the graduates of the Johns Hopkins Medical College who have located in Maryland, the home state of the school, and he says that, out of the 997 doctors that have graduated from that school since its beginning, but four have located in rural Maryland, and he accepts the United States Government's classification of rural communities: all communities which do not contain a city of at least ten thousand inhabitants are rural. He says that the cry for a doctor is already heard from many communities. Some of them say, "A good doctor if we can get one, but if not, a doctor." This means professional crowding in the cities and a serious scarcity in the country under present prospects.

I have had an opportunity to talk to several young men recently who came from rural communities who were ready, or soon would

be ready, to begin the practice of medicine, and some of them were sons of country doctors. None of them intended to go back and take up the father's practice as has been the custom, but all intended to locate in a city. Can anything be done to make practice more attractive in small towns? Probably it can, and an attempt to show how will be made before this paper is finished.

One of the chief objections to the life of a country doctor is the realization of the imperfection of his work. The scope of medicine has been so widely extended that the satisfaction of the general practitioner is past. He realizes that no one man can have a satisfactory knowledge of the treatment of the diseases he must meet in his daily practice, and the more he knows, the more he appreciates his inability to meet all the requirements of his work. The young doctor who has learned the advantages that the city offers with its laboratories, hospitals, trained help and easily reached supplies for any occasion, is not apt to go to the rural district, and if he does, he will soon become dissatisfied and seek a more attractive location. It has been suggested to graduate two classes of doctors, one class as we have been doing, and another class of which not so much is required. This does not seem the proper thing to do. Then what can be done to make a young man, who is competent and ambitious, willing to go to the small town to live? He has gone through long and expensive years of preparation, and any young man who has fulfilled all the requirements necessary to give him a medical degree at this time is competent to do a class of work that rural environments absolutely prohibit. He is entitled to the means that he has been taught to apply and which he must have if he gives his patients the benefit of his knowledge. Realizing that this is impossible, he seeks a place in keeping with his own idea of his ability. But if the means can be provided for satisfactory service, many young men would locate in rural communities who will not do so now.

In looking back over almost a third of a century spent face to face with these difficulties, it has seemed to me a plan might be devised to give the people better service, satisfy the doctor and make his life worth living. There has been a movement in this state for each county to employ a whole time health officer, but for some reason it has never materialized. The politicians have been unwilling and the people have not demanded it, because they do not realize its value. In some places, the people seem to think the office would not be filled by a suitable man and would consequently be but a graft, and in this they may be justified. A health officer

should be able to do something beside diagnose contagious and eruptive diseases and tell people where and how to build their privies. Some of the medical colleges have adopted a special course supplementary to the medical degree for the training of health officers, and a doctor should have this course before he is eligible to this office. He should be able to do laboratory work, such as the examination of bacteriological and tissue specimens and make cultures. Such a man might easily be the most valuable man in the community. Then with a public hospital in each county with a staff of the best doctors available, there would be a foundation upon which something could be built which would be worth while. The health officer could be the executive of the institution.

The first objection to this plan would naturally be that small towns do not possess a sufficient number of competent men to make it a success. The older ones of us may not be suitable material, but those men who have graduated since the standard was raised are thoroughly competent, and I do not endorse the idea that too much of the important work is being done by the "half baked doctor." I have found out that the "half baked doctor" is usually our competitor. In the medical classes, the lazy or the weak mentally are eliminated before graduation day. Specialism is only in its infancy. The very extent and scope of the practice of medicine renders it more and more necessary. Around a beginning, as above indicated, could be built a group of men who could do better work than anything that usually exists in cities of considerable size. To illustrate what usually exists in the small cities: this year I was called into a city of sixty thousand inhabitants to see two desperately sick children with ileo-colitis. I was not familiar with the type of disease that was prevalent in that city, and as the doctor in charge was a general practitioner, I suggested that we call in a specialist on diseases of children, but there was none in reach; then I asked for a man that was giving special attention to diseases of the alimentary canal, and met with the same answer. Friends suggested that the best consultant was the principal surgeon of the city. The truth of the matter was that everybody was trying to do everything, and that condition holds good in most of the cities of less than one hundred thousand inhabitants. The consequence is that all difficult things, as a rule, are poorly done.

It might be argued that the work suggested for the health officer is already assigned to the state pathologist, but those who live at a distance from the state laboratory know the serious loss of time in transporting specimens and getting returns. Before you get a report,

the necessity for it may have passed. If the pressing work could be done at home and the more difficult at the state laboratory, it would be more satisfactory all around. This kind of organization of specialists for group work has already been tried in a number of places with perfect satisfaction. Take, for an instance, St. Luke's Hospital at San Francisco, California. All doubtful cases are examined by a group of men, each of whom makes a specialty of some portion of the work that reaches the question in doubt, and at a regular time each day, they meet in a consultation room and go over the case and correlate their findings. This is far better than sending your case to one or more specialists for examination and report. These reports are usually made by letter or over the phone, and after considering the reports, you draw your conclusions as best you can. Meeting the different consultants face to face in free discussion would give better results in the majority of cases. The doctors of St. Luke's Hospital make strong claims for its success.

However, the most brilliant reports for group work come from the hospital operated for the benefit of the students of the University of California at Berkley in that state. I was attracted to this by the article of Dr. R. C. Cabot of Boston in one of the lay magazines entitled "Better Doctoring for Less Money." He has been severely criticised by the medical journals and by the profession for these articles, and it would probably have been better and shown more courtesy to the profession if they had been published in one of the standard journals. It would be well for every doctor in the country to read them. He makes such interesting statements and shows such remarkable results that I became interested enough to make a trip to the coast to see the place and the man at the head of it. I had the pleasure of being conducted through the hospital by the doctor at the head of the health department of the university, Dr. R. T. Legge of Berkley. He is also professor of hygiene in the university. He explained his methods, and they appeared almost ideal under the circumstances. The hospital is an ordinary residence altered but little, and it seems well suited to its purposes. I mention this only to show the simplicity and inexpensiveness of the plan. He reports with group work, both in prevention and treatment, they have been able to get brilliant results. They use six specialists about half their time and pay them good salaries. The remainder of their time, they may do private practice if they like. Each entrant to the university is required to pay six dollars per year of forty weeks, and for this he gets all his medicine, hospital service and medical attention for the school year. He has to pay a little extra for

his dentistry, but not much, and nominal fees for his capital operations, and they hope to abolish all these extra fees soon. All applicants are examined thoroughly when they apply for admission, and if they are found unsuitable for any cause, they are rejected. The pupils are encouraged to come to the hospital for all troubles, as soon as they detect anything wrong, before the disease conditions are firmly established. They are faithful to do this, and to this they attribute the cause of so little fatal sickness. The number of pupils calling for help at the dispensary averaged 120 daily, and the number in bed averaged 13 1-2 daily. Everyone sick enough to be in bed was sent to the hospital.

I was curious to know if those who were trained to believe in some cult before they came there gave any trouble in resisting these rules. Dr. Legge said that he had absolutely no trouble from this source. The pupils were made familiar with the rules when they entered the university, and the good effects were so apparent that they did not complain of the hospital requirements. I was surprised at this, because I saw more Christian Science literature in California and more evidence of their presence in that state than any other place I have ever been, Boston not excepted, the First Church of the Christian Scientists having the largest attendance of any of the churches in Los Angeles. This was agreeable news, for it is not considered probable that even a university education will correct this fault in a Christian Scientist.

They have between six and seven thousand students in this university, and in the session of 1915-1916, there was but one death in the student body and that was from an accident. To those who are familiar with life insurance statistics, this seems a wonderfully low death record, especially when you consider that the rejections on entrance examinations were less than one-fifth of one per cent, which is a much smaller rejection list than any life insurance examiner would allow. As this faculty was composed of specialists, it would seem probable that they possessed more ability than the average, but the facts do not appear to bear this out. Three of them were women doctors and there was not one of the list except Dr. Legge who had a reputation outside of the locality in which he practiced before he went into this work.

Dr. Cabot argues that the drift in medicine is toward socialism or community medicine, and he is decidedly in favor of it. He looks on the present day method of the family doctor distributing his medicine and advice from door to door as wasteful and inefficient, and that the place for sick people is in the public, not the private, hospital, nor at their homes.

Around the hospital, the system for each city, county or community should be built up.

At this point I want to call attention to the general tendency toward socialism in medicine which began with the German and English Health Insurance Laws. In England it materialized under the title of "The Lloyd George Act," and the medical profession of Great Britain went on a strike against it, which they finally lost after they found that the act was a great benefit to them and relieved them of a large part of their charity and semi-charity practice, as the fund supplied under the law was ample for all purposes. In this country the states are taking hold of it under the Industrial Accident Insurance and Workmen's Compensation Laws. Our own state has made the start, and in some of the states, in one form or another, it has been in practical working condition for two or three years, notably California. One of the best papers at the A. M. A., at Detroit this year was the Oration on Surgery delivered by Dr. Emmet Rixford of San Francisco on Industrial Accident Insurance. He insisted that those who came under the provisions of this law get better treatment when either ill or injured than any other class in California; the rich get fair service, but the middle class, composing ninety per cent. of the people, get the worst and most expensive service of all. He claims that if humanitarianism does not force better conditions, that economics will. Also if the medical profession do not see these things coming and prepare for them, the communities will take it out of their hands. If it comes through the civil powers, it will make the doctor a salaried man who will take his orders from higher up, but if the profession sees it coming and offers the people something better, the doctor will be in control and he can receive fees of his own setting and in keeping with the work he does.

If anything worth while ever comes of such things as "twilight sleep," nitrous oxide oxygen anaesthesia in obstetrics, it must come through the small hospitals, for the large families are in the country, and not in the city as a rule. The mother must be in a hospital where everything necessary in an emergency can be found. Except in the most extreme rural communities, the day of the general practitioner will rapidly disappear, and organized team work that can be correlated before it is completed in a small but well equipped hospital will take its place.

With that remarkable medical organization at Rochester, Minnesota, as an example of what can be done in a small city, it is strange that more of the kind have not grown up in this country. I have seen many of the large hospitals in this country, as well as in the capitals of Europe, but in my judgment the

one in Rochester has the best organized faculty and the most perfect system for rapid and successful work that the world contains. Of course, so perfect an organization cannot be built in every county, nor is it necessary, but one could be made that would give the people most efficient service, that would make it attractive to able and ambitious young doctors, and it could be a center from which the education of the people in preventive medicine and hygiene could be developed, and last but not least, it would do such good work that it would diminish the evil influence of quackery and the cults that, like the camp followers of an army, serve but to hinder the medical profession in its efforts to lessen sickness and suffering and would add days to the years of mankind.

ORATION IN SURGERY

THEN AND NOW IN SURGERY.*

By W. L. GAMBILL, Jenkins.

It is with a mingled feeling of pleasure and regret that I appear before you to-day to attempt to deliver the annual oration in surgery. Words at my command are wholly inadequate to express the gratitude of my heart, not alone for the honor conferred upon me, but for the consolation it affords the heart of an aged physician, my father, and, away above all else, the honor it pays to the memory of her whose ashes repose upon a sun-kissed hill-top in the mountains of Kentucky, my mother. I would have little of the spirit of the mountains and be sadly lacking in that love which every mountain boy has for his home, did I not thank you in behalf of them for the recognition paid them. Until recent years this section of our State has been curtailed off, as it were, from the beautiful Blue Grass as the barren, worthless portion,—the home of feuds, poverty and illiteracy, left, like an old maid, to pine away her days in solitude, no one to woo and win her,—that section of our State of which the balance was ashamed and would have hidden away from the eyes of the world, in the attic or basement, as we would some poor, emaciated, half-witted relative when visitors arrive—never given recognition except when recruits for the army were in demand, or Republican votes needed, or when, perchance, our good friends Dr. Shirley and Dr. McMullen, weary of their professional labors in the city, decided to rest and refresh themselves by spending their vacation hunting—for hookworm and trachoma. Then she was looked upon as a diseased tubercule on the skeleton of Kentucky,

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but time has wrought changes here and she has risen to that status which should entitle her to be called a good healthy trochanter, *trochanter major*, upon Kentucky's anatomy, for through the genius and courage of one of her own sons, she has turned the eyes of capitalists throughout the world toward her, and the feet of thousands of workmen and their families to this land of promise. They are prosperous and happy in the sunshine, yet not averse to the moonshine, of these dear old Eastern Kentucky hills. Letcher county rolls out into the world daily about 20,000 tons of the best coking and by-product coal in the world.

In behalf of these I thank you for the kind recognition. We regret that we are unable to write a thesis upon some surgical topic that would interest you, yet realize that such is not expected, as 'tis given to but few to be leaders, to be great lights in any field of endeavor we therefore have chosen as our theme "Then and Now in Surgery," and in glancing backward o'er the history of surgery, viewing briefly its progress, its lights and shadows, what it has accomplished for humanity, the trials and burdens of its masters, their courage, wisdom and honor, if we can cause you to indulge in a few moments pleasant retrospection, we shall have accomplished our purpose.

The history of surgery dates from remotest antiquity. The oldest operation, and the greatest from a constructive point of view, is recorded in Genesis. We have often wondered which rib the Creator chose, but we have decided that it was the first, second, tenth, eleventh or twelfth of the peculiar ones, thereby explaining the origin of old maids and suffragettes. We thank God that Kentucky got her allotment after the peculiarities were exhausted and they had 'em in a stage of perfection, so perfect, in fact, that we wouldn't dare have the model changed if we could.

Among medical heroes it is the positive, the virile, the real, that appeals to us. Mists and vapors, hypotheses and systems, do not interest the modern mind; but things accomplished and the final word said do interest us. So observe this, that deeds done, facts accurately stated, action taken in accordance with what is known—these things are characteristic of the history of surgery as distinguished from the history of medicine. Often we can not divorce the two tales of medicine and surgery, but when this is possible the tale of surgery and the surgeon will attract us. Its history is the history of civilization. For more than a thousand years before the days of Hippocrates the surgery of Egypt had meant something to the world, and the ancient Egyptian custom of embalming the dead had

given its practitioners a little crude knowledge of anatomy. They trephined the skull for migraine and epilepsy, they performed circumcision, removed superficial tumors, and set broken bones. This knowledge was handed down by the old Testament Jews and practiced by them. The only surgical procedure that we have found mentioned in the Bible is recorded in the second book of Exodus (IV., 25), where Zipporah, the wife of Moses, "took a sharp stone and cut off the foreskin of her son." A sharpened stone seemed to be the knife of those ancient days, and when we pause and consider that operations were performed without anesthesia or analgesia, and picture in your mind some old Egyptian doctor ripping open an abscess upon the anatomy of some fair maiden, or sawing off the prepuce of some poor phimotic youth with an old, dull flint rock, then some of, thank heaven, have a just right to be proud we were born in a modern age.

Egyptian as well as Greek surgeons, who were by no means idle during this time, traveled much either by ship or on foot in search of knowledge. There must have been a fascination about it, and in those days, when your neighbor city was a month's journey distant, when language changed with every hamlet, when information traveled at a foot pace, and news was news still for a decade, one may fancy the delight of moving on and on, leisurely learning things and doing things. The knowledge thus gained was brought back to the home schools which became depots for the learning of the day. At this time and into such a life Hippocrates was born. He was the prophet needed to give articulate expression to that formless learning, to show the meaning of what other men had seen, and out of his own wide experience to add the master word of the great teacher. He had a clear conception of many surgical lesions, was a keen observer and interpreter of clinical symptoms, employed rational surgical methods of treatment, taught others what he knew, and, last but not least, placed honor, dignity and sincerity paramount in our profession. God grant that we, as doctors of this modern age, and those who are to minister to humanity when we are gone, never forget this last phase of the teaching of the father of our art.

For nearly 500 years after his death the science of surgery languished, until there arose that famous Alexandrian School which for a thousand years was the Mecca of medicine. The one great thing accomplished during this period was the study and development of anatomy by dissections, and from the time of Alexandria to the time of Vesalius anatomy made no advance.

The greatest name after Hippocrates was

Galen. His is memorable for the discovery of the true function of the arteries, anastomoses of arteries and veins, and his studies of the nervous system. He, in fact, was our first great physiologist. Thirteen hundred and fourteen years after his death was born the founder of modern anatomic research, the man who made possible for us the development of surgical science, Andreas Vesalius. We hear a great deal of talk in the Sixteenth Century about "barber surgeons" and "surgeons of the long robe," and if the mere effusion of blood were the only requisite to entitle them to the name, then now up in my county of Letcher their fame would shine with a splendor that would eclipse that of a Mayo or a Crile.

As we peer into the Sixteenth Century looking for a hero, our eyes turn to the sunny land of France, and behold him the glory of whose achievement shall be remembered as long as the stars in heaven shine. Ambrose Pare. He began life as an humble barber surgeon and ended as the greatest surgical authority in Europe, and the best beloved man of his country. He is best known to us for two great improvements in our art—a simple treatment of wounds and the use of the ligature in amputation. It was he that banished forever the method of pouring boiling oil into wounds, and especially gun shot wounds, and to treat them in a simple and human way.

For many generations after Pare there was no great or radical progress in surgical art, anesthesia being made certain to a waiting world 256 years after his death, but between Pare and Lister the science of surgery did not stand still. Anatomy was revised, histology and chemistry were born, physiology was reborn, the great science of pathology itself came to be intelligently studied, embryology was developed and the uses of the microscope made known in a limited way. During this period Borelli worked out the uses of the muscles; Malpighi demonstrated the anatomy of the liver, the kidney, the lungs and the skin. He saw the red blood corpuscles and discovered the capillary circulation; Paracelsus pointed the road to modern chemistry, while the illustrious Harvey demonstrated the proper functions of the heart and of the circulation of the blood. Von Haller taught surgery for seventeen years and brought to bear upon it not only a profound knowledge of anatomy, but demonstrated what is true to-day, that the surgeons must look to physiology for the advancement of their art.

The man who dominated the surgery of the Eighteenth Century as well as he who was most conspicuous in the Nineteenth, and

whose fame will grow brighter down the vista of years were sons of old Scotland, and when she gave to the world a Hunter and a Lister she donated her greatest gift to humanity, names that will shine as bright and imperishable stars as long as the memory of man shall exist.

Hunter, Haller, Morgagni, are the famous names for us in the Eighteenth Century—Morgagni, pathologist; Haller, physiologist; Hunter, pathologist, physiologist, surgeon. Many able surgeons had lived in the interval between Hunter and Pare. Experience had been accumulating, research had been extending, books had been written and knowledge had been diffused, but, as the American Colonies needed Washington and Lafayette, as the Union needed Lincoln and Grant, and in the words of that old song of love, "Like the flowers need the dew, Like a baby needs its mother," then, son of old Scotland, John Hunter, that's how we needed you. Volumes might be written of his life and deeds, for his studies embraced an enormous field, but suffice it to say that fundamental work was his great work, and his name is perpetuated by Hunters' Canal and his contribution to genito-urinary surgery.

And here let us glance briefly at American surgery. It grew out of English surgery led by Hunter, and as our best surgery for nearly a century was dependent on the teachings of Europe, it may be divided conveniently into three eras: The Hunter era, the middle or French era, and the German-American era. Until within recent years American life has furnished little opportunity for the laboratory student of science. The stress of life and the circumstances of their being have forced them into practical work, into personal relations with their fellows. They have ever been doing practical operations of the highest type. It is a story of great clinicians. The most prominent names during this early period are John Jones of New York, Wm. Shippen, Jr., of Philadelphia, John Warren, of Boston, Philip Syng Physick, called "The father of American surgery," Post, Mott, McDowell, Barton, Pancoast, Agnew, Parker, Bigelow, Gordon, Buck, J. Marion Sims and Samuel D. Gross. The one man to whom our present era owes the most is Sir Joseph Lister. His discovery of antiseptics and Morton's discovery of other anesthesia have revolutionized surgery. The development and establishment of scientific methods of study have placed American surgery of to-day in the front rank of the surgery of the world. No more is it necessary that the young surgeon sail the stormy Atlantic in quest of knowledge. When they boast of Monahan, Lane and others, we point proudly to Mayos, Crile and the lamented Murphy. He is gone but the

dazzling splendor of his achievements shall ever since as one of the brightest jewels in surgery's crown of glory. An attempt to add luster to his name before an audience of his profession, brethren, would be like adding splendor to the sunrise, or fragrance to the breath of morn. His loss to us is as if some brilliant star upon which we were accustomed at evening time to gaze fondly with love and admiration were suddenly extinguished from the firmament of heaven. If "Freedom shrieked when Koskusko fell," then the entire surgical world trembled when the grim reaper struck from the hands of John Benjamin Murphy his shining scalpel and sealed forever the lips of one of the greatest teachers of all time.

While the progress of surgery in the last few decades has been almost miraculous, yet we must give to the masters of centuries ago full credit for their brilliant achievements. Its path has not ever been one strewn with roses, but the rugged path of adversity, superstition and ignorance. It has had pressed upon its brow the crown of thorns. It has been opposed by rulers, the law and church, but human power has proved futile to stop its progress. Then we see it, gentlemen, the oldest of all the profession. If they challenge its wisdom, we point with modesty to its brilliant record of achievement; if they challenge its honor, we point with pride to the fact that it has ever marched breast forward and kept faith with humanity; if they doubt its courage, we point to the bloodstained field of battle, where the cannons are roaring and the small guns are sending forth their missels of death, and ask, who upon that field of carnage is more gallant than the regimental surgeons. Not only do they go where shot and shell fall thickest ministering to the wounded, but when night comes o'er that bloody field and the weary armies are asleep with a flickering lantern or by the moon's misty light, they search among the dead for a heart that yet beats, ministering alike to friend and foe. Not only here, but in times of plague when thousands flee in terror and pestilence walketh in darkness and destruction at noonday, he, like the Roman sentinel at the gate of Pompeii, stands at his post, perhaps falling there a martyr to duty, science and humanity.

In review, let us glance backward to the fountainhead of the River of Time. We behold that crude little surgical bark as she is cast upon the waters. We see her drifting slowly, manned by the ancient Egyptians; on down the stream we see her boarded by the Old Testament Jews; we see her touch the shores of Greece and take aboard her first great pilot, Hippocrates. Under his leadership we see her speed and grandeur increase. With his death we see her drift aimlessly

along the shores of superstition and ignorance, until 155 A. D., when appears her next great leader, Galen. We see him steer her to midstream and continue the voyage. For 1300 years after his death she made no material progress. She was washed upon the rocks. In the 16th century we see her overhauled, rebuilt and guided by the master hands of Vesalius and Pare. We see her drift into the 18th century to be manned by Haller and Hunter. Under their admirable leadership her progress was great. We see her pass on into the 19th century, during the latter part of which she received her greatest additions. Among the hundreds of brilliant names that were added to her rebuilding here, that of Sir Joseph Lister stands pre-eminently in the fore. Her progress in the last three decades is familiar to us all. Behold her anchored there to-day! The most magnificent spectacle upon which the eyes of man shall ever gaze! More majestic in her grandeur than the lamented Titanic, more powerful than the greatest fleet of dreadnaughts that ever donned their war paint to meet a hostile foe! In lieu of sixteen-inch guns and torpedo tubes, we behold a shining scalpel and all the modern instruments of precision. We see upon her decks those white-capped angels of mercy whose services to humanity should ever entitle them to peans of praise, "Sweet as the smile when fond lovers meet and soft as their parting tear." We see her manned by the master surgeons of the world, attired in spotless white, the greatest combination of conscience, courage, brain and honor beneath the stars. We see streaming from her masthead a pennant inscribed "Humanity first and always."

We can only say in conclusion, "Flag of Surgery, wave on, wave ever!" And when the mighty hand of Time shall force this gallant ship to the dark river, she will anchor safely on the other side and her crew will be among the first who shout, "Hosanna to the King."

Use of Duodenal Tube for Diagnosis and Treatment.

White regards the duodenal tube as being a real contribution to medicine, although the field for its use, both in diagnosis and treatment, is somewhat limited. He used the tube in 90 cases; fifty-six for diagnosis, in thirty-four for treatment. The tube reached the duodenum in about 30 per cent. more of the cases within fifteen minutes; in about 30 per cent. more within a half hour, and in about 20 per cent. more in the cases within one to six hours. In about 20 per cent. of the patients the tube had to be left in over night in order to reach the duodenum. Some difficulties were met in adapting the routine to different sizes of patients and different sizes and shapes of stomachs.

ORIGINAL ARTICLES

NON-TUBERCULOUS INFECTIONS OF THE KIDNEY.*

By CLAUDE G. HOFFMAN, Louisville.

The kidney is unquestionably one of the most important anatomic structures embraced within the human organism; and, strange as the observation may appear, there is no other name in English, by which it is known. In the French, *rein* and *rognon* signify kidney, and in English *reniform* is sometimes used in describing bean-shaped objects.

It was formerly the quite generally prevailing impression that the kidney enjoyed the distinction of being practically immune to bacterial invasion. Although the pathology known as "inflammation of the kidney" (nephritis) had been familiar for hundreds of years, the role of micro-organisms in the production of the inflammation was not definitely understood.

While careful and systematic bacteriologic and histo-pathologic study of the renal tissue is of comparatively recent origin, our knowledge of the subject has rapidly advanced. For some time after renal infection became an established fact, however, it was presumed the micro-organisms invariably reached the kidney through the continuity of the urethral vesical and urethral mucosa, although it was noted that the bacteria most frequently found in the lower portion of the urogenital tract (the Neisserian diplococci) were rarely demonstrable in the renal tissues.

In connection with the question of ascending infection, the anatomic fact must not be forgotten, that the ureter is a propulsive organ, not merely a musculo-fibrous tube for conveying the excreted urine to the bladder, and the migration of bacteria must be exceptional from below upward against the constant urinary stream. It is admitted, however, that where obstructive lesions exist within the renal pelvis or the ureter, the ascent of bacteria may be possible; but even under such circumstances the so-called "ascending" infection may be through the lymphatic or vascular channels rather than the urethral lumen. "Ascending infection of the kidney quite often takes place through either the lymph or blood vessels of the ureter; the lumen of the ureter is less often a factor in

ascending infection of the kidney than has previously been supposed."

In the absence of the obstructive lesions, regardless of the character of the micro-organisms, the theory of ascending infection through the ureteral lumen is now considered practically untenable, and has been succeeded by the more reasonable hypothesis that all infections implicating the kidney, pelvis, and the parenchyma are either hematogenous or lymphatic in origin. The former is probably more frequent than the latter, owing to the multiplicity of the vascular arrangement compared with lymphatic distribution. In addition to the general circulation, the renal blood vessels communicate with the bladder through (a) the utero-ovarian, and (b) the ureteral vascular apparatus. Free anastomosis has been demonstrated between the branches of the renal and ovarian arteries; the ovarian artery also freely anastomoses with the uterine and the vesical; and as anastomosis is both venous and arterial, a septic focus within the bladder, the uterus or the adnexa may cause re-infection through the general circulation or the anastomotic channels. However, "even in septic conditions of the lower urinary passages, the concomitant renal lesion may be of hematogenous origin."

While the renal lymphatic distribution is probably less abundant than the vascular arrangement, it is known that "an extensive network of lymph vessels and channels exist in the mucosa and the sub-mucosa, in the external coats of the bladder and the ureters, and in the entire structure of the kidney. This network in the ureter anastomoses freely with the lymphatics of the bladder at one end, and with the lymph apparatus of the kidney at the other end." The intestinal and renal lymphatics are also intimately associated. The lymphatics of the transverse colon, splenic flexure, descending colon and part of the sigmoid transverse the capsule of the left kidney: those of the cecum and ascending colon pass over the capsule of the right kidney; the lymphatics of the appendix are also closely connected with the kidney. Based upon "our knowledge of the lymph channels draining from the intestinal tract into the kidney," the frequency of renal infections associated with acute and chronic gastro-intestinal disorders may be readily explained.

"It is scarcely ever possible to decide in any individual case which route the bacilli take in passing to decide their original position to where they ultimately 'set up' disease. It is, however, quite certain that they are sometimes carried by the blood stream, sometimes pass the lymphatic channels, and sometimes ascend from outside by the lumen of the urinary tract."

In my opinion the general term, nephritis,

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without qualification, should never be employed in connection with renal pathology; pyelitis, pyelonephritis, pyonephritis, pyonephrosis, etc., are more descriptive and understandable. Invasion of the kidney by any of the following micro-organisms may be productive of the lesions just mentioned:

- (a) The colon bacillus.
- (b) The streptococcus.
- (c) The staphylococcus.
- (d) The bacillus typhosus.
- (e) The bacillus pyocyaneus.
- (f) The bacillus proteus vulgaris.
- (g) The bacillus pneumoniae.
- (h) The bacillus influenzae.
- (i) The bacillus ureae.
- (j) The diplococcus of Neisser.

And a host of other typical and atypical forms. It must be remembered that any of these bacteria may not only cause varying degrees of pyelitis, but also the more serious renal lesions enumerated; and that clinical evidence more or less characteristic of kidney infection may result from chemical irritants without the presence of bacteria.

From the foregoing, it is obvious that, for the most part, non-tuberculous kidney infections are secondary rather than primary in character, the bacteria being disseminated from adjacent or distant foci through either the blood stream or the lymphatic channels. The infection may be either unilateral, or bilateral, the former being the most common; it may likewise be acute, subacute, or chronic. The fact remains that only one kidney is primarily involved is probably to be explained by lowered resistance of the renal tissues upon the affected side. "Bacteria can pass through the kidney out of the blood into the urine in great numbers and for a long time without exciting inflammation," provided there be no diminution of kidney resistance. During the course of infectious diseases bacteria entering the blood stream are largely excreted by the kidney, yet no demonstrable infective lesions may be produced: (a) if the bacteria are not too numerous, (b) if their virulence is low, and (c) if the kidney possesses normal resisting power. "If one of these three elements is lacking, typical lesions are not produced." Thus, in addition to the infecting agent, there must be some cause (traumatic or otherwise) operating to reduce the resistance of the renal tissue. Injury may be inflicted upon the kidney from without; it may be prolapsed or rotated upon its axis, thus interfering with the circulation; the ureter may be abnormal from stricture or deformity.

Renal infection is favored by pre-existing disease, obstructive lesions, local hyperemia,

etc. It is said to have followed urethritis, prostatitis, cystitis, bronchitis, hemorrhoids, proctitis, sigmoiditis, colitis, appendicitis, bronchitis, otitis, meningitis, tonsillitis, pneumonitis, hepatitis, pancreatitis, cholecystitis, typhoid fever, scarlatina, malaria, diphtheria, salpingitis, endometritis, cophoritis, peritonitis, nephrotosis, coloptosis, gastropstosis, any change in the relative position of the intra-abdominal and intra-pelvic viscera which may cause renal or ureteral disturbance with consequent obstruction to the urinary outflow, may be a contributing factor in the production of kidney infection.

Every surgeon of average experience has probably noted the not infrequent occurrence of renal infection following intra-abdominal and intra-pelvic operations; such infections are usually due to either the colon bacillus or the streptococcus. In mild post-operative infections the patient may recover under appropriate treatment; in severe types prompt dissolution usually occurs from uremia. Post operative renal infection has followed enterostomy, hysterectomy, ovariectomy, salpingectomy, appendectomy, prostatectomy, and many other major surgical procedures.

The pathology of renal infection may present a similar clinical picture regardless of the responsible micro-organism, the essential difference being only one of degree. An adequate description of the various renal lesion would be a difficult task, as it would necessarily include all the gradation between mild congestion and complete destruction of the kidney substance. As a general proposition, the evidence of infection first manifests itself in the renal pelvis, the parenchyma being almost invariably secondarily involved, i.e. there is first pyelitis, then pyelonephritis, pyonephritis, pyonephrosis, etc. In the majority of instances abscess formation supervenes, and this may be early or late depending largely upon the virulence of the infection.

Quite naturally the symptomatology varies according to the degree of virulence of the infection. In mild grades of pyelitis the clinical manifestations may be so slight as to attract little attention. When the deeper renal structures become implicated, however, the severity of the symptoms is correspondingly increased. The temperature may be high (104 degrees F.), the pulse rapid (120-140); signs of intoxication and uremia appear; pain and tenderness are evident upon palpation; pus, blood, epithelial cells from the pelvis, renal tubules and ureters, albumin and sometimes casts are present in the urine. The so-called "renal colic" is not an uncommon symptom.

The diagnosis of renal infection based upon the clinical signs is not always easy. In

some instances the clinical picture may closely resemble that of appendicitis, lumbago, pleurisy, typhoid fever, malaria, etc. Pain, chills, fever, nausea, vomiting, are inconstant, and may therefore be misleading; the same may be said of malaise, headache, anorexia, coprostasis, and dysentery, tenderness in the kidney region, with or without evidence of enlargement, is indicative but not entirely trustworthy as a diagnostic sign. The most dependable information may be secured by roentgenoscopy, cystoscopy and ureteral catheterization. The microscopic presence of renal derivatives in alkaline urine is suggestive of a kidney lesion, and the positive demonstration by ureteral catheterization that pus originates in the kidney renders the diagnosis certain.

The minute details in connection with the treatment of the different types of kidney infection cannot be considered in this paper, but a brief outline may be permitted. There probably occur more cases of pyelitis and pyelonephritis than commonly believed. Mild acute attacks without characteristic symptoms, also chronic infection with slight evidences of toxemia, may be overlooked or diagnosed and treated as auto-intoxication, malaria, etc.

The treatment most appropriate may be either medicinal or surgical, depending upon the character of the bacterial invasion and the extent of renal involvement as demonstrated by clinical and bacteriological investigation; and to arrive at a proper basis for the institution of rational therapeutics, the following factors must be recognized: (a) the contributing cause, (b) the predominating invading micro-organism, and (c) the exact pathology, i.e., whether pyelitis, pyelonephritis, or pyonephrosis. Whether the primary infection is unilateral or bilateral must be determined by ureteral catheterization, and in unilateral cases the functioning capacity of the opposite kidney should be determined by the phenolsulphonaphthalein or indico-carmin test. In every case if there exists a primary infective focus elsewhere within the organism this must be eliminated; obstruction lesions if present must be located and removed.

Conservative measures are advised in the majority of cases of renal infection where the patient is seen early. This consists of rest in bed, a milk or other light diet, the ingestion of large quantities of pure water, hot or cold applications, the internal administration of hexamethylenamine, sedatives when required, suitable remedies to overcome coprostasis if it exists, etc. Some most excellent results have been reported from the use of vaccines, both the stock and the autogenous. Lavage of the renal pelvis may be advantage-

ously practiced, and is indicated where the infection does not promptly yield to more conservative measures.

Little can be expected from radical surgical treatment in any stage of bilateral renal infection regardless of the causative factor, and, for the most part, operative procedures are contra-indicated. Decapsulation and resection have been performed in several instances of bilateral infection, but the results have not been encouraging. In unilateral infection, exposure by laparotomy, puncture of existing superficial cysts or abscesses, decapsulation with or without nephrotomy, drainage, resection and nephrectomy are accepted procedures. In virulent unilateral infection the other kidney being anatomically and functionally normal, it is suggested that to temporize with conservative operative measures oftentimes merely means to court disaster, and primary nephrectomy is the safer and more satisfactory procedure from the standpoint of both the surgeon and the patient.

The conclusions of Eisendrath in a recent contribution, *Interstate Medical Journal*, July, 1914, cover the subject so thoroughly, that I am taking the liberty of reproducing them almost verbatim in summarizing this paper:

(1) Infection of the kidney may take place by one or more of four routes, a combination of several not being an exception. The first is the blood route, (hematogenous); second, the so-called urogenous, along the interior of the ureter, the micro-organisms being carried into the pelvis of the kidney with the stagnant urine; third, the lymphogenous, that is, from the lymphatics of the bladder to their communication with the lymphatics of the kidney; fourth, the connection of the lymphatics of the colon with those of the kidney. This route has not been proved, but seems a plausible explanation for some of the cases, especially those occurring in infancy and childhood.

(2) Many of the cases of renal infection are dependent upon the presence of a calculus blocking the ureter, oftentimes the pelvic portion, or at the uretero-pelvic junction. For this reason a routine examination with the X-ray of every case of renal infection should be made if possible.

(3) Many of the cases of renal infection are masked by the pseudo-malarial chills and fever, or the typhoid-like course of the temperature. In every case where there is elevation of temperature in which a negative Widal or malarial test has been made one should always think of the kidneys as the possible source of the infection.

(4) The symptoms of renal infection are oftentimes so indistinct that the kidney is not thought of as the source of obscure fever.

Tenderness and other local signs are not infrequently absent, even though the general symptoms are of the most septic character.

(5) Both acute and chronic hematogenous and urogenous forms of infection may be unilateral, and their early diagnosis may greatly assist in removal or other methods of treatment of the infection.

(6) The best method of eliciting tenderness over the kidney is either by bimanual palpitation or by palpation at the costo-vertebral angle. The most reliable evidences clinically of renal infection are, however, those obtained by the use of the cystoscope and the ureteral catheter.

(7) Pelvic lavage is of more assistance in the cases of chronic than those of acute infection of the renal pelvis. At times in the pyelitis of pregnancy and of the puerperium, if they do not yield to conservative treatment, the pelvic lavage will often cut the disease short.

(8) Reformation of renal calculi in kidneys which are the seat of chronic colon bacillus infection is not infrequent, and must be considered in giving the prognosis of any case in which a stone has been removed, where the kidney is the seat of long-standing infection. The calculi will reform as long as infection is present. Not infrequently such infection is bilateral, necessitating the avoidance of nephrectomy on account of the advanced condition of the disease in both kidneys.

(9) In children with high temperature, especially of the remittent type, the kidney should be thought of immediately as the possible source of infection.

(10) In the most severe types, both of urogenous and hematogenous infection, the general septic symptoms in the form of bacteremia may mask the local condition completely. The longer the obstruction of the urinary passage exists, with infection of the kidney, the more advanced are the pathological changes in the latter.

(11) Primary nephrectomy, if the opposite kidney is capable of doing the work of both, is to be preferred in advanced cases of renal infection to a conservative method. A secondary nephrectomy is exceedingly difficult, on account of the very firm adhesions and the danger of hemorrhage. The term pyelitis is often mistaken in its application; the majority of cases belong to the type of pyelonephritis, both the parenchyma and the pelvis of the kidney being involved.

(12) Cases of mixed infection of tuberculous and pyogenic microorganisms are very difficult to diagnose, and must be thought of in the majority of cases of renal infection of the chronic type. The bladder symptoms, which are often so marked in the ordinary

type of tubercuolosis, are entirely absent or are not present in sufficient degree to lead one to suspect the presence of tuberculosis.

(13) Conservatism should be the rule in all cases of renal infection except those of the hyperacute type. In the latter nephrectomy should be performed as early as possible. In the acute form of renal infection whether hematogenous or urogenous, one should at first try the conservative measures outlined. Even a nephrectomy with decapsulation of the kidney and the puncturing of the little abscesses scattered over the cortex may save the kidney. One should not, however wait too long with such conservative measures, and if a prompt response is not obtained, nephrectomy should be performed at once. (Eisendrath).

DISCUSSION.

Herbert Bronner, Louisville: I think Dr. Hoffman has given us a splendid and timely paper. The subject assigned to him is so broad that one can only touch on certain phases of it.

One of the most interesting features is the method by which these infections are produced. Only a few years ago it was supposed that these infections were urogenous in character; in other words, the infection simply traveled by the mucous membrane. Practically every one has now abandoned that idea, and we now believe that the greater percentage of these cases, the infection is hematogenous in character, and that in a small percentage of these the infection is lymphogenous.

It is largely by experimental work that this fact has been crystallized, and we are proud of the fact that our American surgeons have helped to establish that fact.

Brewer in his classical address before the International Medical Congress held in London, England, showed that if we inoculated a dog with a virulent organism, if the kidneys were absolutely normal before hand, no infection would take place. But, as brought out by the essayist, if resistance were lowered either by injury or by the presence of a foreign body, or by stasis, or by anemia, or by other factors, if then we inoculated an animal with a virulent organism, we could produce acute unilateral hematogenous infection of the kidney.

The work of Brewer has been confirmed by so many others that we now accept that as an established fact.

Two other Americans—Sweet and Stewart—have established the fact that the lymphatics of the kidney and bladder have direct connection with the lymphatics of the ureter, showing that ascending infections of the kidney are no longer urogenous, but lymphogenous in character.

Among the most interesting infections of the kidney is acute unilateral hematogenous infection, so-called septic infarct of the kidney.

It might be well to say a few words in this connection on prognosis and treatment which depend upon the type of the lesion.

Broadly, these lesions should be divided into two types—those due to the colon bacillus and those infections in which we have practically no focal symptoms whatever. The patient presents symptoms of acute sepsis—chills, fever and prostration.

Practically the only focal symptoms which are diagnostic are not recognized, namely, costo-vertebral tenderness and rigidity. In the coecal type of infection the urine shows few organisms, hence the importance of recognizing that these infections exist.

If a purulent condition of the kidney exists, unless nephrectomy is done at once, the patient will immediately die. Examination of these kidneys shows in the coecal infection the trouble is in the cortex and ends in a perinephritic infection. The colon infection is not so virulent, and these cases respond to milder methods of treatment, either medical or if operation is necessary, some mild procedure, such as decapsulation of the kidney.

C. G. Hoffman, (Closing): There is little or nothing to say upon the discussion of Dr. Bronner. There is only one point I wish to bring out that I did not touch upon in my paper. The subject was such a broad one that I could only hit the high places, but getting away from the old idea of these infections being of the serogenous type, there is one thing that impressed this subject upon me, and that is the frequency of the infection of the lower urinary tract with the gonococcus. We know it most uncommon to have ascending infection of the kidney or kidney pelvis or the bladder from gonococci. The first case reported in American literature was by Dr. Kelly in his *Gynecology and Obstetrics* in 1894. In going over the literature I could find six other cases, and they were reported by foreign authors.

Bradycardia of Thyroid Origin.—Sakai gives several charts and tables to show the course and details in a case of disturbance of impulse production, auriculoventricular automatism, with pronounced bradycardia—pulse 42—all evidently traceable to irritation of the vagus nervous system. The data presented demonstrates that this irritable condition of the vagus is the result of the normal thyroid secretion. The thyroid functioning was at a very low ebb, and the heart disturbance could be corrected at will by injecting treatment. The patient was a woman of 42 who had long had an apparently ordinary goiter, and complained of loss of hair and menorrhagia. Sakai says that he knows of no analogous case on record in which impaired functioning of the thyroid was responsible for abnormal impulse production of this type in the heart.

ABRAHAM LINCOLN.*

By CURRAN POPE, Louisville.

“Oh, why should the spirit of mortal be proud?

Like a swift, fleeting meteor, a fast flying cloud,

A flash of the lightning, a break of the wave,
Man passes from life to his rest in the grave.”

Standing upon this ground made immortal by the birth of Abraham Lincoln, beside the lowly log hut in which the humblest, simplest, and plainest of our National Leaders was born, within the walls of an edifice erected by the free gifts of a generous and liberty loving people, we meet, my medical brethren and fellow citizens, that we may pay tribute to, and take courage and inspiration from one of the greatest men America produced. His memory lives in deeds, not of valor, not of slaughter, not of blood reeking fields and vanquished foes, but homely ones, deeds that lightened misery, made the sad joyous, restored lost sons to weeping mothers and doomed



Lincoln Memorial

husbands to heart-broken wives—a man whose traits simple and human endeared him to us and makes his memory a blessed and a hallowed one. To-day in his case, we reverse the Shakespearean dictum that the “Good is oft interred with their bones.”

We Kentuckians may take a just pride and a pleasure in knowing that there has been created a Nation's Shrine, permanently set aside by the people, under the control of the Federal Government, to which in future years, pilgrims the world over, will come and hold communion with an unforgettable memory. One hundred and seven years ago, on February 12th, 1809, on the big South Fork of the Nolin River, a plain and simple couple, living in the then backwoods of Kentucky, and now the County of LaRue, had born unto them a male child that was destined to sway the hearts and lives of his countrymen and

*Read before the Lincoln Memorial Meeting of the Muldraugh Hill Medical Society, at Lincoln Farm, September 7, 1916.

to hold in the hollow of his bony palms the destinies of millions of souls. Here upon this little sterile farm was born a human light, whose very shape and build and look were like the environmental aspects that surrounded him. Here on this sod he was to lay in his early life the foundation for that rugged strength and power of endurance that he strained in the dark hours of Chancellorville



Statue of Lincoln, Hodgenville

and that ever marked the career of this wonderful and unusual man. We speak a great deal of heredity and environment. While his parents came of ordinary good stock, still his father was coarse and illiterate, his mother probably tubercular, and his environment so barren physically and intellectually, that we wonder as to whether or not the indomitable persistence, the perseverance and success that this man attained was in spite of heredity and environment. He had no chance in life, coming as he did, from the commonest clay and no opportunity for betterment save what he himself made, and it is this, and his upward struggle that has made this lowly, clumsy backwoodsman, the model and the inspiration for the struggling youth of our Nation. In Kentucky, later in Indiana and Illinois he grew and developed, making his character "even as you and I." From inhospitable opportunity and lack of chance, he turned the tables of adversity and from his poverty and dire needs he struggled upward, doing unselfishly for others, learning to love humanity in the abstract, broad, deep, lasting. From his own struggles and deprivations he learned how others struggled and suffered and therefore felt a deep and personal sympathy for them; from his contact with the people he

learned what books can never teach, an experience and knowledge of men. From wood and vale, from land and sky, from the terrible battle to extract a living from a barren land, from solitude and the simple life, he was learning that courage, that humor and that truth that was to stand him in good stead when the dark days came—when hurled into the chaos of an internecine strife he saw brother smite brother, saw a great Nation rent asunder, saw the white stripes of courage, the red bars of blood and the stars of liberty and freedom threatened with destruction and partial eclipse. From his life's record we, medical men, especially those that practice in the country can take unto ourselves the lesson here recorded, meeting the inhospitable elements, the difficulties of the work, the lack of sympathy, the failure to remunerate, may yet pluck the precious jewel from sweet adversity and purifying the soul through endless effort, develop to its utmost a kindly helpfulness, a resourcefulness, sympathy, courage, and humor, like unto this man, whom we honor to-day and whom all the world loves. Let it not be said that we cannot and will not profit by a knowledge of the early struggles of Lincoln, but let us each in his sphere carry in his heart and breast his undaunted courage, and from trial and tribulation uplift ourselves to a seat among the pure in heart.

Lincoln grew to young manhood passing through many phases of life, farmer, frontiersman, merchant and politician, finally



Lincoln Cabin.

reaching the goal he had so longed for namely, the practice of law. At that time the fully matured man had developed a body, a personality and a character that made him unique in every way. He stood like a tall sycamore six feet four inches; long of arm, lank of leg, with great big bony hands and feet; with a skin dry and yellow, a face thin and gaunt; cheek bones high and prominent; angular at every turn, awkward and gawky yet possessing tremendous strength from muscles like flexible steel wires. He was stooped shouldered with a tendency to walk

with his scraggy neck thrust forward and his mouth awry. In their sockets were put a pair of strong eyes, sunken, grey and melancholic, partly hidden by their cavernous orbits. As the God had attempted a contrast, He made this uncouth ugly man honest, good natured, courageous, gentle, generous, fair, kind, chivalrous, self-reliant, sincere, cool calm, and slow to anger; blessed him with a quaint and charming humor; made him eloquent of speech, a splendid storyteller; sensitive, imaginative, tender as a woman; yet self-willed, determined, original, with unconventional manners. This country clod-hopper, woodchopper, peddler, pioneer, abolitionist, politician, and lawyer rose from his lowly



Spring on Lincoln Farm

estate to be the proud possessor of the highest gift within the power of the American people whom he loved in fact and not in fiction of the political speech makers. To me, it would seem that Lincoln's features would have been cold and chill, were it not for the fact that they were plastic, that over them could play that redeeming smile that welled from the deep chambers of a heart so warm, so generous, so large and so loving that all humanity seemed to find an abiding place and yet leave within its chambers vast veldts yet untouched. To me of all his traits his very humanity with its frailties, and weaknesses, makes him more a man and less a God and brings him and his memory into such close touch with us. Heroes we all admire, are willing to accord to them that wonderful power, that transcendent ability and that mystery that sets them apart, but some way, or some how the possession and the exhibition of simple, plain, everyday frailties such as we possess, brings us in close harmony with one who could at one and the same time be of the

earth, earthly and yet whose soul was attuned with the Infinite.

Lincoln possessed an almost uncanny faculty of presenting facts, simply and clearly. A clear presentation of facts requires a clear conception of facts, and perhaps this faculty was brought out and cultivated in the lonely solitudes of a lonely and unhappy youth, brought compactly together and shaped definitely by the hard knocks of experience even as the blacksmith compacts and shapes the molten mass under the powerful blows of his heavy sledge. Lincoln did his own thinking. This may seem trite and commonplace, but it is really surprising how few do their own thinking. The "herd" tendency and the rule of the "system" lead most men to learn secretly what the majority think, keep their ear to the ground for every change and after adopting the views of the multitude to blatantly express them as their own. Lincoln would never have been ruled by a system. Having become sure of his ground he would maintain it although always liberal and tolerant of the opinions of others. No man ever lived that respected more one's motives and he was the last to attribute sordidity and meanness to others, but really endeavored himself to find the truth.

Would that all men, and especially doctors were less hasty to condemn their brother doctor, without facts, without knowledge and without that reasonable investigation that the truth seeker should ever possess before he indulges in the luxury of an expressed opinion. It is said that "the truth is mighty and will prevail," but its success and establishment may be long delayed, especially where any system or oligarchy endeavors to make all men equal, to suppress personal endeavor and discovery, and to rob men of the fruits of their labor and endeavor, under the specious pretense of good for humanity. Science in general and medical science in particular is at its best when freed from the trammeling influence of such repression, for it must ever be remembered that genius knows neither locality, creed, Nation, nor body of men, but springs like Minerva, full armed *cap-a-pie* without the walls of Academic University, in unlikely places and should be uplifted, not repressed. Few can weather the cruel grill, make good and achieve a great end as Lincoln did, but between the extremes lie many lesser geniuses and lights that an oligarchy would destroy, letting their gems of purest ray serene decorate some dark unfathomed cave, dooming them to mediocrity. We must bear in mind and practice in our own ranks the liberality and the breadth that characterized this great American.

Lincoln is a shining mark to a man educating himself. If I were asked to give a rea-

son why he learned so much I would promptly answer that he wasted no opportunity to acquire knowledge. His historians tell us that he loved not the laborious and rock road to learning, nor had he the knack of ready acquirement, but what he did beget was the result of much travail, hard study and slow acquirement. He himself has likened his mind to a tablet of steel, upon which it was hard to engrave a single line, but once cut it was almost impossible to ever erase it, and what he accomplished was in spite of the fact that he hated mental drudgery. I have personally learned from the hardest of knocks what Lincoln early learned, that there is no *via regia* to knowledge, and that everything that is well done requires time and careful preparation, and that the finding of the real facts in any field of effort only comes after hard study, cold analysis and thorough separation of the wheat from the chaff. Would that the medical profession in this respect, more often followed Lincoln's example.

The fool, the knave, and the charlatan profess to know even to all knowledge. It is the wise man who say "I do not know." It was neither humility nor hypocrisy that led Lincoln to refrain from many claims to knowledge he did not possess, but in this as in all things he had an honesty of purpose in life that rose high above the petty, miserable, lying subterfuges of the dishonest, and we, as disciples of the Esculapian art can well afford to train our minds and at-tune our souls to a true appreciation of this part of his character, in the moulding of our own and in our dealings with our fellowmen. The young practitioner contending with "the slings and arrows of outrageous fortune" may "take up arms against (his) sea of troubles" in disgruntled fashion but he had far better study the life of this plain man of the people and extract from the rich placer of his life, the glistening nuggets of his wonderful example.

Let a man take a position, right or wrong, that is opposed to the consensus of opinion of those associated with or about him, in private, business, political or professional life and one of two things will happen; retirement to the shades of the unknown and the unheard of, or a fierce and persistent personal attack. The principle will be forgotten. If in this life one wishes to lessen fiction, satisfy the multitude, avoid trouble and "rough sledding" he should bear in mind the profound and worldly wise dictum of Balzac, that, the wildest politician is he who, swimming in the river of events, keeps his head above the surface and floating with the current appears to guide its course. In sum and substance to have no principles, no guiding star. Alas, this is too often true in medicine. There are indeed too few who, like Lincoln,

raise their voice for truth and honesty, accept the personal penalty, the verbal or professional crucifixion that seems to follow from such deeds even though the outgrowth of the purest of motives. To read and ponder the many rebuffs, the many defeats, Lincoln sustained for what *he* believed to be the right, makes one feel that here we have an example of the value upon others of high purposes for indeed, the defending of principles to the bitter end and to the hour of defeat, requires blood and brawn like unto our martyrs. Strong indeed is he who suffers thus, who so controls himself and his destiny that, Phoenix-like, he rises above the ashes of his defeat, uncompromising, and displaying no mean, no petty, no personal resentments. If we remain calm, if we be courageous, we may in like manner follow in the footsteps of this matchless leader. If you have tasted the bitter dregs of the cup of defeat, have felt the keen edge of soul-suffering it entails, have felt that never again could you breast the surging wave within the whirl-pool of life, then take down those volumes wherein is recorded the early, middle and late life and sufferings of Abraham Lincoln. To him, failure seemed to be but the crucible in which he was melted: each failure like each heating of the crucible seemed to remove again and again the slag and dross from his character, until purged and purified by many heatings he was like unto a pure and tenuous metal capable of infinite and intricate moulding.

In these halcyon days when the damage-suit lawyer seeks to make litigation, when the unsuspecting physician presents an "easy mark" it were well to bear in mind his immortal words upon this subject. "Discourage litigation. Persuade your neighbors to compromise whenever you can. Point out to them how the nominal winner is often the real loser, in fees, expense and waste of time. Never stir up litigation. A worse man can scarcely be found than one who does this. A moral tone ought to be infused into the profession, which should drive such men out of it." Though his appearance was against him he was unusually successful as a lawyer, without in any wise breaking his own rule. Hill says of him: "During all his three and twenty years of active practice Lincoln never found it necessary to sacrifice his conscience to a code; he never surrendered his private principles for gain; his services were constantly in demand but they were never for sale; he served hundreds of clients, but was owned by none. His ideas of justice and honor were not regulated by the latest decision; he recognized something higher than the judgment of a court of last resort. Yet he was neither an impractical dreamer nor a God." Here, my medical brethren we have

epitomized a code of ethics worthy of any man.

He did not miss suffering. Malignity welled from its deepest and darkest pits to villify him; no accusation was too low or too mean but what was hurled against him; insult upon insult was heaped upon him mountain high, Ossa on Pelia; personal malice and spite were vented upon him as rank and poisonous as the deadly cobra, until Honor blushed and Truth hid its head to think that he must suffer so. But he remained unmoved. Like some tall mountain of granite upon whose serried sides the wintry storms have beat until the polished rock shines and glistens, so he stood amid the storms of hatred and passion, undaunted, untouched, unflinching. Vengeance is mine saith the Lord of Hosts; this Lincoln remembered, and all through the hatred, pettinesses and even treachery of those around him, he went his way rugged, strong, unswerving. He sought no vengeance but forgave; practiced patience and fortitude at all times, and ever listened to the dictates of a heart that beat synchronously and sympathetically with all human suffering. Slow, honest, temperate in body, thought, word and deed, he bore without complaint the sorrows of a Nation, ever teaching us by personal precept and action. We appreciate Lincoln's heroic qualities as a great President, as the Saviour and Preserver of a now United Nation, as a martyr, but we love and revere his memory because he was at all times Lincoln, *the man*, a human, sentient being like ourselves. We love him because his life, character and achievements are possible to any man, in any line of occupation for in all lines the elements of success are built upon the fundamental principles upon which he conducted his life.

This lank, loose limbed man never knew, never sought, never wanted rest. Melancholy brooded over him from birth to a piteous death closed by tragedy. But when the recording Angels trace with blazing stilus upon the golden tablets of Immortality the records of deeds well done, how small, how cold, will seem those of military conquerors beside this humble, lowly, simple, plain, poverty stricken and clumsy backwoodsman, who left a memory so noble so high, so holy that *all* men, of every political creed, revere and cherish it, claiming it as a birth-right and so deep has it been engraven into the public conscience, and so majestic have grown its true proportions that it has become a basic part of our American Institutions. To-day his memory rises like the sun to illuminate and strengthen men's lives, to shed a radiance of holy sympathy over their deeds, and to warm the hearts of his fellow creatures.

God seemingly took from the sterile clay of this inviting farm enough to make a mould

wherein He created a man, the like of whom has rarely been equalled, destined him to suffer and bear the pangs of sorrow and humiliation and as did His only begotten Son, die an ignominious death.

Only by standing at this humble spot, only by contemplation of his still humbler home can we realize how the light of his life was shed, how it spread and grew until the whole Nation was basked in its effulgence.

Only by standing here and realizing that he was the friend of the Nation do we understand and appreciate how cruel and foul was the assassin shot that struck him down, yet in that tragic passing men saw his life illumined in its true radiance, and awoke to a full realization of the truth of Stanton's words "He belongs to the immortals."

" 'Tis the wink of an eye, 'tis the draught of a breath;

From the blossom of health to the paleness of death,

From the guilded saloon, to the bier and the shroud,

Oh, why should the spirit of Mortal be proud?"

THE RELATIONSHIP OF FEEDING IN INFANTILE ECZEMA.*

By M. L. RAVITCH and S. A. STEINBERG,
Louisville.

Infantile eczema usually makes its appearance first on the face; afterwards, through irritation, infection and sensitization of the skin it may spread to other parts of the body. Irritation in some form or other seems to be the main etiological factor in this type of eczema, whether irritation from without or irritation from within. As the face in the infant is the part which is usually subjected to less external irritation than any other part of the body we naturally look rather to internal irritation as the cause, and especially do we look to the diet, since infantile eczema usually appears in babies who have shown in other ways that they are on an improper or insufficient diet.

The diet may figure as a primary cause of infantile eczema in the following ways:

(1). There may be an insufficiency of proteid, fat, carbohydrates or salts in the diet. This is rarely so in the breast-fed babies since human milk is naturally the most nearly perfect food for the human infant, the result of thousands of generations of adaptation of each of the other. However, there are cases where the mother does not produce sufficient milk for the infant's nutrition or the milk is too low in some ingredient, and then it is nec-

*Read before the Muldraugh Hill Medical Society.

essary to supplement the breast feeding with a few bottles feedings daily or even to put the baby on bottle feeding altogether. There are certain constitutional conditions in the mother which may make her milk poor in salts, especially lime, so that while the baby may be fat and seem well-nourished there is poor bone formation and obscure changes in the blood, with diminished coagulability and tendency to exudative eczema. With artificial feedings, whether modified cow's milk, mixtures of dried milk and cereal solids, or condensed milk, there is often a deficiency in assimilable nourishment. This may be due to improper mixtures, as when a physician gives a suitable formula for a month old baby and the same formula is used when the baby is six months old; it may be due to too small and too few feedings. The result will be that there will not be the proper rate of growth; there may even be loss of weight and frank malnutrition. Before a breast-fed baby is placed on the bottle, every effort should be made to determine first whether the breast-milk is insufficient; an examination of the milk and quantitative estimation of the fat, sugar and proteid should be made; then if the milk is low in quality or quantity an effort should be made to correct this by increasing the mother's diet and correcting her habits. Finally, if the milk can not be brought up to the proper figures, one should try first to get pure, rich cow's milk and modify it to the infant's needs, changing the formula until one dose strikes the proper mixture and then adapting that mixture from time to time to the growing infant.

(2). The diet may be liberal enough, but owing to the inability of the infant to digest certain ingredients, it may prove insufficient. This applies especially to babies on artificial feedings; a baby who has had no trouble in digesting human milk-fat may have trouble in digesting the fats of cow's milk; or the larger, tougher curd of cow's milk may interfere with digestion of the proteid; or in the mixtures of cow's milk and cereals much of the carbohydrate may be present as starch, which is indigestible by young infants. The stools in these cases will give valuable information and an examination of the feces should not be neglected, both macroscopical and microscopical. When there is protein—or casein—indigestion the stools may contain curds or clots of undigested casein; owing to putrefaction there will be a strong odor of indol and skatole, almost nauseating, as a rule. In fat-indigestion the excess of fat appears in the stool as globules of fat or soapy curds, while microscopically crystals of the fatty acids will be found. In starch-indigestion the feces will be full of undigested or only partly digested starch granules, readily identified un-

der the microscope by their reaction with iodine; the inability to digest sugars is less easily determined, but such a stool will usually contain a great deal of lactic acid. Fat and starch indigestion cause many cases of infantile eczema; where the fat is at fault the eczema is most apt to be of the moist exudative type, while starch causes the dry, scaly type. The offending substance should be removed from the diet entirely for a short time, whereupon improvement will nearly always follow promptly; restoration of the diet to the usual figures should be slow and cautious, while substitutions should be made when possible. Thus, in starch indigestion lactose or sucrose should replace the starch; in proteid indigestion the feeding of whey instead of whole milk will often furnish an easily digested albumen; in fat-indigestion olive oil or cod-liver oil may sometimes be better borne than butter-fats, and small, frequent feedings better than the larger feedings at greater intervals.

(3). Improper articles, such as should not be given to an infant of that age. Before the baby is old enough to digest starches he should not be given bread crusts to suck on, as is often done. Meat-gravy is another thing that is often given much too soon. Beer, pickles, diluted whiskey,—it would seem unnecessary to warn against such things, yet they are too often given to babies by ignorant mothers or nurses. They are nearly certain to produce indigestion.

(4). Toxic substances in the food. They may appear in mother's milk as a result of tuberculosis, syphilis, septic infections, nephritis, convulsions, and various chronic constitutional conditions. The milk of women with hyperthyroidism is often toxic. Where there is a mastitis, the affected breast, at least, should not be nursed from, but should be emptied and kept from going dry by means of the breast pump until normal again. In cow's milk toxic substances may appear as a result of tuberculosis, infections of the udder, improper feeding (distillery slop) or stabling in dirty, ill-ventilated and dark stalls, or they may be due to changes in the milk from bacterial contamination. Where the best of care is not taken to keep the milk clean and chill it immediately after the milking sufficient bacterial growth may take place in it to make it unsuited for consumption in a few hours. Pasteurization has but little effect on such milk as far as destroying the toxins already formed is concerned. In this regard it should be remembered, too, that a pasteurized milk may become quite toxic and yet show no visible changes nor be sour to the taste. Unpasteurized milk always contains some lactic acid forming organisms whose growth not

only shows when the milk is unfit for food by the souring and curdling caused by the lactic acid, but also checks the growth of pathogenic and putrefactive bacteria. When these acid-forming organisms have been destroyed by pasteurization any putrefactive forms that gain entrance to the milk can grow unchecked, and they may develop highly toxic substances without affecting the appearance or taste of the milk. A pasteurized milk with a bacterial content of 100,000 per c.c. should be regarded with more suspicion than a raw milk with a count of 500,000. The greatest of care should be taken to have a clean milk; where there are municipal examinations of the milk the reports should be obtained and studied. Where modified milk is being used it does not matter so much if the milk is somewhat low in butter-fats, so long as it is clean and pure, since less water can be added in the modification.

(5). Lack of vitamins in the diet. Our knowledge of these all-important substances is as yet too slight for us to make any positive statement regarding their relationship to eczema, yet we do believe that eventually certain cases of eczema will be found to be due to a lack of vitamins. Those who have seen the changes which occur in beri-beri, scurvy, pellagra and the experimental polyneuritis of pigeons will not find it hard to believe that a deficiency in some vitamin can cause eczema. We have at present under treatment an adult whose eczema we believe to be due to a deficiency of vitamins; changing the diet to one rich in these substances has resulted in prompt and rapid improvement. As the vitamins are destroyed by heat such foods as milk and cereal powders, condensed milk and even boiled milk may contain too small an amount of vitamins. Raw milk, whether human or bovine, would hardly be low enough in vitamins to be insufficient for the infant's needs.

(6). Anaphylaxis. We now come to a new and most interesting field, the effect of foreign proteids when introduced into the body parenterally, that is, without having been previously broken down or digested. Nearly every proteid, when brought directly into contact with certain cells of the body that if the same proteid is brought into contact with these cells a second time a reaction will take place, which we call an anaphylactic reaction. As a rule, when proteids are ingested as food by mouth, the digestive fluids break these proteids down before they are absorbed to a point where they are no longer proteids and thereafter unable to cause either sensitization or reaction. However, it is possible for proteids ingested as food by apparently normal individuals to cause sensitization or anaphylaxis, and this is probably due

to minute abrasions of the mucosa of the stomach or intestine allowing unchanged protein to leak through the wall-lining into the blood-stream. As the proteids of the food are changed to a non-proteid condition fairly rapidly and as the rate of absorption through slight abrasions must be slow it is probably extremely seldom that sufficient protein leaks through to be dangerous to life. However, from clinical evidence, it would appear that the frequent repetition of even slight anaphylactic shocks is sufficient to cause skin-eruptions in certain individuals. When a person is sensitive to a proteid either he should be desensitized or that proteid should be omitted from the diet. In order to find out whether anyone is sensitive to certain proteids we may make use of the local reaction of the skin, since the skin of an individual who is sensitive to a certain proteid will give a pronounced local reaction to the injection or inoculation of that proteid into the skin. The test is similar to the Von Pirquet test. For each proteid to be tested for two abrasions are made in the patient's skin, using a knife, chisel, or, as Dr. White of Boston suggests, a dental burr. The instrument should remove shining, slightly moist surface; the abrasion should never be deep enough to cause bleeding or even much serous exudate. Each pair of abrasions—when testing for more than one proteid at a time—should be a couple of inches from any other pair, and separated from each other at least an inch. One is covered with a suspension or solution of the proteid to be tested for in physiological saline; the other is covered with saline alone as a control. The control should develop only an erythema. The test abrasion, if positive, will develop a well-defined papule, usually most marked 30 minutes after the inoculation; if negative, it should show only the same erythema as the control abrasion. If both abrasions are positive, the skin is so sensitive to injury as to render the tests of no value so far as determining proteid sensitization. Some individuals will be sensitive to several proteids. As far as is known only proteids are capable of causing anaphylaxis, and in those cases reported of positive skin-tests to lactose, butter-fat, and other non-proteid substances we can only suppose that the test-substances were not sufficiently purified, but contained traces of proteid clinging to them. In infants on a milk diet the only proteid which they receive and therefore the only ones which need to be tested for are casein and lactalbumen; if on a mixed diet it may be necessary to test for other proteids, such as those of beef, mutton, pork, wheat, corn, etc. Where an individual is sensitive to a protein he may be desensitized by inject-

ing the offending proteid under the skin, beginning with very minute doses and working up, the injections being given every three or four days, or by feeding the proteid by mouth in increasing quantities. However, this must be done with care, for a considerable degree of anaphylactic shock may be produced. It is hardly advisable to attempt desensitization in infants; but better to leave the offending proteid out of the diet. An infant who is sensitive to cow's milk may show no reaction to goat's milk, which has other advantages over cow's milk for the infant.

In conclusion, whenever there has been digestive disturbances the intestinal tract is usually swarming with bacteria, often of a harmful character, and a very restricted diet with intestinal antiseptics may be necessary for a few days to get rid of this excess. Moreover, even when the necessary corrections have been made in the diet the skin-lesions may persist, the skin having gotten into the habit of catarrhal inflammation, just as an infection in a joint may persist after the focus in the tonsils or elsewhere has been removed. The external treatment should be carried out with due consideration for the delicacy of the skin in the infant. Zinc ointments, modified Lassar's paste and protective and soothing powders should be used on the skin and any abrasion should be protected against secondary infection.

INFANTILE PARALYSIS.*

By JACOB GLAHN, Owensboro.

In presenting to this august audience a thesis on "Infantile Paralysis" its technical name; "Poliomyelitis anterior acuta" I do so with some trepidation, as this whole country has been considerably aroused and justly so, not so much about the deadly effect of the disease in itself, but more on account of its destructive sequence, the after-effects, upon the different parts of the growing and expanding bodies, especially so of the young.

So much has been written about this fearful disease and one-sided theories have been advanced as to befog the minds of even our best medical authorities, and it seems to me, that too much stress has been laid upon the germ theory without paying any attention at all to Virchow's philosophy as to pathological conditions found in this disease; neither is there any attention paid upon the most magnificent deliberations of Trousseau and Pidou on the blood, etc.

Now any case in the court of medical science (or medical ingenuity) ought to be accorded the right, to have the evidence of both sides of the case in question, considered;

thereby we might find the key to this terrible disease; anyway it will create a clearer understanding of the question at issue and medical treatment may become more effective at once and thereby obtain better results as to the destructive after effects.

BARTHOLDI'S DEFINITION.

By infantile paralysis is meant a peculiar form of spinal paralysis, occurring in children *suddenly*, and due to an inflammation of the anterior horns of gray matter. It is now known that the same form occurs in adults also, though much less often.

CAUSE.

Infantile paralysis as the name implies, is a disease of early life, and occurs most frequently from six months to the fourth year; but precisely the same form of disease occasionally is encountered up to sixty years of age, so that the term proposed by Kussmaul—poliomyelitis anterior acuta is more appropriate.

Besides age little is known as to the causes producing this disease.

The influence of summer heat seems established by the observations of Sinkler, *American Journal of the Medical Sciences*, Vol. lxxix. p. 348.

As cases frequently occur during the course of convalescence from the exanthemata, and other acute febrile affections, a causative relation is supposed to exist between them. The important negative fact, that the influence of heredity can not be traced.

Dr. T. S. Bell of blessed memory, Professor in the medical department of the University of Louisville, many of his students are still living and especially through the South, no doubt will remember his uncompromising attitude on the causation of periodical congestive fevers. He held to the opinion that moist summer heat for an indefinite length of time (he usually took 60 days as his standard of the length of time) will produce congestive fever in predisposed individuals; he meant of slight physical resistance. It is well to keep this "maxim" of our old Professor T. S. Bell in mind during the prosecution of our case, for a greater and deeper "Medical Philosopher" never lived in any country, and it is a pity, that he was so little understood, by his associates and students.

Boerhave holds that a fever is the endeavor of nature to boil up the abnormal chemical conditions and thereby bringing back the physical organization to normal again.

Pathological Anatomy. The naked eye-appearances furnish no exact information, and may be entirely negative on microscopic examination, important changes are found in the anterior horns of gray matter, in the

*Read before the Daviess County Medical Society.

dorso-lumbar and cervical enlargements of the cord.

The change consists in an inflammatory softening; the nerve-elements are disassociated by an exudation containing numerous granulation corpuscles and free nuclei; the neuroglia undergoes hyperplasia, and the multipolar ganglion cells have wasted and blood-vessels are abnormally distended; the many disappeared, while those remaining are in various stages of atrophic degeneration. The softening extends a little posteriorly and latterly, and sclerotic degeneration also occurs in the adjacent antero-lateral columns.

Similar changes take place in the anterior roots. Extensive wasting atrophic degeneration, and sclerosis occur in all cases and after many years. The anterior nerve-roots are thin, atrophied, and translucent, and more or less degeneration takes place in the filaments of the peripheral nerves.

The muscles to which the nerves are distributed undergo very serious alterations, which consist in an increase of the connective tissue, the formation of numerous fat-cells and granules, and the degeneration and disappearance of the muscular fibres.

The bones of the paralyzed members cease to grow, and degenerate more or less, the cancellated structures being relatively increased, and the fatty tissue also.

Important changes occur in the joints; the articular surfaces are atrophied and eroded, the ligaments thinned and stretched, the articulations relaxed. By reason of these atrophic changes great deformities, the worst forms of club-foot are produced. In this dissertation we must be mainly guided by *first principles for its proper comprehension*.

Physical life is a fermentation process, it is a chemical action of resolution (see Alexander von Humboldt's views and observations in Nature). It is accepted by all biologists to be a spontaneous synthetic evolution, of course *normal cell-evolution* must then be the sequence of aforestated maxim, "a spontaneous synthetic evolution."

Bartholow's delineation of the pathologic condition of this disease is exquisite.

We find a soft watery, edematous inflamed condition of the gray matter of the anterior horns and adnexing tissue, nervous as well as connective tissue.

This indicates an abnormal chemical, a depraved metabolic condition of all the fluids and tissues of the body, *they are subnormal*.

The point of least resistance in infantile paralysis being the anterior horns of gray matter of the spinal cord and this is easily explainable, when we recall, that the nervous system in growing children is always more or less on the stretch, due to the expansion and growth of the human body, of

that period, (infancy) therefore always a little vulnerable, a little prone to disease, especially so after exanthematous diseases or fevers; this same statement applies also to weakly adults.

Trousseau and Pidou on the blood say "it is not so much the quantity of the blood, as the quality that determines abnormal pathological conditions in the physical organization."

There can be no doubt, that the quality and quantity of the basic salts within the physical body are lacking in a decided degree in infantile paralysis; causing a primarily and persistent chemical deficiency in the fluids and cells substances of the body and organs a probable degree of status lymphaticus, roused into activity, now add adverse environment; telluric conditions, plus great atmospheric heat for an indefinite length of time; new chemical, fermentative synthetic changes will take place in an already abnormal soil.

An abnormal or better expressed subnormal fermentation must produce an abnormal, in this dissertation, synthetic product; the result of subnormal oxidation. What this peculiar abnormal synthetic product will do, to the fluids and tissues of the affected cord and nervous system, is evidenced by the just described pathological anatomy of this disease.

If this lowered oxidation produces a chemical synthetic condition in the affected parts, which acts in a destructive manner upon the fluids and tissues *per se* or if they produce new, not yet recognized bacilli in a spontaneous manner, or through the chemically changed disturbed soil, their previously natural habitat, bacilli naturally benign and harmless, now have become vicious and destructive, is the office of the biologist-chemist to solve, and ought to be now an easy matter to definitely prove the *specific materies morbi*.

But the physician, the clinician, the humble bedside practitioner, can now *secundum artem* readily and logically understand the *vis medicatrix naturae*, the way nature directs that it is his business to at once try to improve the blood with gentle alterative tonic restorative medication, which will at once bring about an improved synthetic change and reaction in the tissues and fluids affected; for it does not require a great deal of alterative medication to neutralize the infection of the anterior horns of gray matter, improve it and so guard against its destructive action.

SYMPTOMS.

The usual onset of this disease is a fever, which lasts a day or two, and on recovery from which it is observed with surprise that the child is paralyzed.

The fever may be accompanied with head-

ache, pain in the back and limbs, with vertigo and delirium, in some cases with convulsions.

Dr. Mary Putnam-Jacobi (*The American Journal of Obstetrics*, June, 1874), has analyzed one hundred and sixty-three cases, and finds that there are several modes of onset. In twelve cases the paralysis occurred suddenly without any prodromes; in some cases the paralysis appears in the morning after a quiet night, or better between morning and evening, without symptoms. In the majority of the cases there is an attack of fever lasting two or three days; in some, merely nausea and vomiting, and in still others the paralysis is preceded by convulsions. What symptoms soever precede the palsy, they subside in a day, or in two or three days, and the health seems restored, but one limb or several are found to be paralyzed; or one leg is limp and motionless, and in an hour or two the other leg is found to be in the same condition; and in the course of the next twenty-four hours the arms may also be paralyzed. From the beginning of the symptoms until the paralysis is completed rarely more than a week is required.

AS TO COMPLICATIONS.

The bladder may participate in the paralysis, and the urine be retained, or there may be incontinence, but the bladder is not permanently affected, and these troubles disappear in a few days or weeks. Sensibility is not affected. The paralysis is complete at once and soon begins to lessen, some restoration of power taking place in from one to three weeks, which may gradually go on until the paralyzed parts are completely restored in the course of a few months; most cases behave differently, improvements begin as in the case just narrated, but it proceeds to a certain point only; some of the members recover entirely, leaving one or more or a single group of muscles affected.

The temperature of the paralyzed parts falls several degrees; they become cool at the touch and present a blue cyanosed appearance. For further information on this head I refer you to any standard text book.

COURSE, DURATION AND TERMINATION.

The course of the disease is very uniform.

The mild cases, in which restoration of power begins in a few days, recover entirely in a few weeks or in a month or two. These cases have been designated, "temporary paralysis."

Other cases, in which a single member or group of muscles remains paralyzed after the efforts at restoration have ceased, may regain the lost power in from two to six months. If the restoration does not take place within this

time it becomes less and less likely with the increasing duration of the case. Partial restoration is the rule even in favorable cases.

Much depends upon the treatment.

So far as ultimate entire restoration is concerned, the prognosis is unfavorable.

Persistently and rightly conducted electrical treatment may accomplish much, even in unfavorable cases.

DIAGNOSIS.

The first point in diagnosis is the condition of the paralyzed muscles. If wasted, how do the muscular elements exist? this is ascertained by electrical tests. In these cases the muscles do not respond to a faradic current, but will contract on the application of a weak and slowly interrupted galvanic. Muscular contraction is the proof of the presence of the muscular elements. Some portion of the tissue could be withdrawn and submitted to a microscopic examination. Infantile paralysis may be confounded with acute myelitis, hemorrhage into the cord, progressive muscular atrophy, paralysis from cerebral affections in childhood and paralysis from local-nerve lesions so much for diagnosis.

NOW FOR TREATMENT.

During the attack of fever with which the disease begins, only symptomatic treatment is proper, since a diagnosis is not possible.

When paralysis has occurred the damage to the cord is complete, but as the functional disturbance is more extensive than the symptomatic expression of the real lesions, the improvement which follows from the paralysis is simply the disappearance of the merely functional troubles. Any active treatment therefore, instituted, with a view of combating an inflammation, is improperly applied. The problem is: *To prevent further destruction of gray matter and restore damaged but still functionally capable tissue.*

The remedies best adapted to accomplish this, and which in the author's hands (Bartholow) have acted best, are quinia and belladonna (from a fourth to four grains according to age, of quinia, and from one-twentieth to one-fourth grain of belladonna extract) hot douche to the spine and tepid water packs; the application of galvanism, inverse current, stable, large volume and low intensity, and rest, as nearly absolute as possible until the period of restoration.

When the period of improvement comes on, the muscles may be faradized, if they react to the faradic current, massage is suitably combined with electrical treatment. The wasted muscles are much improved by aquapuncture; still more by intra-muscular injection of strychnia gr. 1-100 to 1-60, two or three times a week. The injection of strychnia

nia should not be practiced until after the period of restoration, the stationary period.

Bartholow on treatment says the following:

"The problem is to prevent further destruction of the gray matter and to restore damaged but still functionally capable tissue."

For additional treatment, tincture of iodine in fractional doses for a few days at a time, tr. iodine gtt. i-iii to water oz. i or elixir lactated pepsin with a few drops of cascara. One teaspoonful every three or four hours with a drink of water. Carbolie acid in same proportion is also scientific. For pain morphine to assure physical rest. Some preparation of lime and soda, especially the chlorides thereof in small doses to follow up, should meet Bartholow's statement on treatment of this disease and would no doubt solve the problem.

Some elegant preparations of tasteless cod-liver oil with lime and soda gtt 15 to one teaspoonful 3 or 4 times a day.

Pure cod-liver oil, one teaspoonful night and morning, if weather should turn cool. When using massage along the spinal column and affected muscles, would suggest, that the masseur dip his fingers in a tablespoonful of pure cod-liver oil and use it up, every time as an inunction once a day or less often, this method can also be extended to axillae and thighs. Good results will be obtained with light splinting, strapping or bandaging; passive exercise should also go along with medicinal treatment; which is very necessary.

In conclusion, the evidence of both sides of the case is all in. Kock's and his followers' germ theory received its due place in this disease, and Virchow's philosophy of the chemical-synthetic evolution of cell-life and its social relation in the organic corporation in the human body have been harmonized with the germ theory, and it should now be an easy task for the vital chemist, acquainted with chemical work and observation at the bedside, to spot and explain the real materies morbi "the defacto infectious agents involved in this disease."

We have shown that the disease springs up mainly in infants below five years of age, and sporadically in weakly adults; that it affects the anterior horns of the spinal cord, where all the voluntary actions of the will come into play; therefore always on a great strain, especially so, in early childhood and in weakly adults.

We have also observed, that peculiar moist telluric conditions, followed by great heat or severe cold, which has the same effect under similar conditions, seems to be the exciting cause of this disease; and it is reasonable to accept this observation as correct, when we

remember a lowered tension from within the physical organization of the infant and a raised tension from without, caused by abnormal telluric conditions and great atmospheric heat.

Lately this disease has been considered contagious in the sense like influenza, coryza or a common cold, secretions either from the mouth or nostrils, etc., of man to man, or animal to man, or flies, bed-bugs, fleas, what not?

The clinician, the bedside practitioner should ever keep in mind the pathological picture so ably outlined by Bartholow, and adjust his treatment to his case in hand, viz.: absolute rest, obtained, if necessary, with morphine not with bromides, for the latter drug benumbs and depresses the nervous system, a condition, which must be avoided. A good dose of castor oil, to be repeated as occasion requires.

A shady, cool, out-door place, if possible, or an airy artificially cooled room 70 to 78 degrees Fahrenheit, if agreeable to patient, the room should be screened, none but the nurse be allowed with the patient.

The food should be plain, wholesome and nourishing, according to the stage of the disease, pure fresh milk, brown toast with a little fresh sweet butter, fresh cool water at proper intervals; at subsidence of fever start with more substantial food; but you gentlemen know this already. Serums and vaccine treatment are still subjudice and can only act, if ever successful, in a chemical-neutralizing manner, similarly as alterative-reconstructive therapeutic agents do.

Gentle antiseptics of intestines with elimination, of the mouth and nostrils, etc., are indicated. Alterative, reconstructive tonics should be begun at the earliest possible moment; so as to improve the *status lymphaticus*, fluids and synthesis of the cells; and last but not least by patient persevering and optimistic after-treatment, electric and surgical, such as bandaging light strapping and splinting and manipulation under your personal observation, and last but not least, remember the mental factor, hope, cheerfulness and optimism, coupled with a firm desire to get well great good and better results will be obtained and the people of the country will bless the humble bed-side practitioner, as the greatest specialist in the universe.

Gentlemen, I thank you for your kind indulgence and attention.

SPLENOMEGALY OF INHERITED SYPHILIS.

By CHARLES A. VANCE, Lexington.

The following case is one of unusual interest to me. It is rather a rare condition and I believe it is of sufficient interest to the profession to be placed on record.

The patient was a girl fifteen years of age. The family history could not be obtained as both parents were dead and she knew nothing about it herself. Some friends sent her here from the mountains and they knew very little about her.

There was no history of any skin eruption in her babyhood, nor of any other disease that her friends or she knew of.

Her illness began two years ago, when she began to have attacks of jaundice. She had a number of these attacks and recovered from each of them in a short time. Three times she had attacks of abdominal pain like colic; these attacks lasted several days would pass away, and then she would be entirely free from pain. Her abdomen had gradually enlarged until the swelling was very marked. All this time she had constant pain and a dragging-down sensation on the left side of the abdomen and occasionally some shortness of breath. She sometimes bled from her mouth and gums. There never was any blood in the stools, nor were there any clay-colored stools.

She was very poorly nourished and far behind the normal in general and sexual development. Her breasts were not developed at all and her pubic hair was very scanty. Her skin was slightly jaundiced. Her face had an old withered appearance. Her teeth were not well formed, but distinctly "Hutchinson's Teeth." Her mouth and throat were negative. No enlarged glands were felt anywhere. The heart dulness was pushed up; sounds were clear and there were no murmurs. The breath sounds were normal; there were signs of fluid in both bases posteriorly, with a good deal more in left base.

The spleen extended below the umbilicus and to the right beyond the median line; the edge was very plainly felt.

The liver percussed slightly enlarged and the edge could be felt on inspiration. There were signs of free fluid in the abdomen. There was enlargement of superficial abdominal veins. The urine was negative. Blood examination: White blood cells, 4,800 red blood cells, 3,110,000; haemoglobin, 50 per cent; the differential white count; polynuclears, 65 per cent; lymphocytes, 30 per cent; large

Mono-nuclears, 5 per cent. No Wassermann test was made.

The case was diagnosed by myself and every one who saw it as one of Banti's Disease.

Splenectomy was done August 10th. I opened the abdomen through a right rectus incision and a good deal of clear fluid escaped when the peritoneum was incised. The upper border of the spleen was adherent to the diaphragm, but after being separated, it was easily delivered and the pedicle was ligated and cut off. The wound was closed with drainage. She had very little shock and after operation improved a good deal. The spleen weighed five pounds after being drained of blood. Blood examination August 15th, white blood cells 30,400, with 80 per cent. polynuclears; red blood cells 4,720,000; haemoglobin, 75 per cent.

Her wound healed primarily, and on August 24th, she was out of bed and walking around the hospital, and seemed to be gaining strength rapidly. Blood examination August 24th showed: white blood cells, 30,000 with 86 per cent. polynuclears; red blood cells, 4,260,000; haemoglobin, 80 per cent.

About six o'clock on August 27th, seventeen days after the operation, she said she felt sick and had pain in her head. She was put to bed and died quietly in about fifteen minutes.

Autopsy: There was some fluid in the abdominal cavity and a good deal of fluid in her left chest, the left lung being pushed way up in the pleural cavity; there was a small amount of fluid in the right chest; the left diaphragm was three and one-half inches thick; the liver was knobbed and hard; the ligated stump of the spleen pedicle was healed and omentum adherent; the kidneys were negative, the heart was negative. We were not allowed to open her skull.

Microscopical examination of the liver and spleen by Dr. A. S. Warthin, of Ann Arbor, is as follows: "It is syphilis, most probably congenital, as the character of the liver cirrhosis is that of a diffuse interstitial type. The caseous areas are typical gummata. If the case was one of acquired syphilis, it must have been very early acquired."

The literature on this subject is very scant and very difficult to find, but from a careful study of everything that I could find for a number of years, I have made the following deductions:

Splenic enlargement is recognized by all authorities as a symptom in inherited syphilis. Moderate splenic enlargement in children from five to fifteen years of age may be about the only evidence of an inherited syphilitic taint, except the positive Wassermann, which is frequently present. Hutchinson states that in infancy the degree of enlargement is usually slight, but often met with in syphilitic

infants. A more marked splenomegaly is one of the late manifestations of inherited syphilis after the second dentition and is usually associated with cirrhosis of the liver. In this latter type the spleen may be gummatous.

Occasionally the teeth may be of the Hutchinson type; there may be interstitial keratitis, persistent cracks at the corners of the mouth, a history of some skin eruption in babyhood, a history of syphilis in the parents, or of inherited syphilis in the brothers and sisters.

The splenomegaly of inherited syphilis is often accomplished by occasional, slight attacks of obstructive jaundice and by excess of urobilin in the urine.

Hepatic cirrhosis, with or without ascites, may be associated with the splenomegaly, and at the time of death the cirrhosis is usually of the hobnail type. The cirrhosis of the liver in these cases is of specific syphilitic origin.

The inherited syphilis in these cases may be associated with some degree of infantilism, a more or less retardation in general physical development, and especially in the sexual functions.

In these cases great caution must be employed in regard to anti-syphilitic treatment, especially mercurial, probably on account of the general delicacy of the patients and their liability to renal and catarrhal complications. Iodide of iron seems to be very useful.

In these cases there is generally very little real anaemia, even where the general appearance is cachectic; and anaemia, if present, is often temporary.

Abdominal crises, pain, etc., of uncertain explanation, may occur both in the inherited and acquired syphilitic cases.

Splenomegaly in children may be the most important sign of the presence of hepatic cirrhosis, when the former is either secondary to, or due to the same cause as the latter.

A good many cases of splenomegaly in children with inherited syphilis probably ultimately present the characteristic clinical features of splenic anaemia or Banti's Disease.

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SUMMER DIARRHOEA.*

By F. G. CARROLL, Cave City.

This condition may be divided into four classes as to etiology:

1. We have the acute dyspeptic diarrhoea usually caused by eating food unsuited for the patient, such as unripe fruits, stale, decaying fruits and food, mulberries and June apples.

Symptoms: Cramping pains in the abdomen, general symptoms of distress and stools which at first contain particles of the food which are responsible for the attack; followed by mucus.

Treatment: Nature has already begun this with the friendly diarrhoea; lend a helping hand by giving a large dose of castor oil, which, in my opinion, is the best purgative for the occasion. Withhold food for a few hours or days as case may demand. Then give food of light character, with some intestinal antiseptic of your own choice, preferably small doses of calomel at from 5 to 6 hour intervals have served me best.

2. Summer complaint occurs in hot summer months at the age of twelve to eighteen months, or in second summer, when child is off the breast feeding, and is being experimented with often by the "all too wise parents, and neighbors." This trouble is produced by bacterial growths in the alimentary canal, which produce a change in the entire canal, and by the absorption of its toxins, produce our great trouble.

The stools are frequent, watery, usually green, of bad odor and if acid will excoriate the buttocks.

Treatment: A good oil purge will get rid of as many bacteria as possible; and then retard their growth by giving food of different character from milk, such as rice water, albumen water, barley water or orange juice.

Dilute the remaining bacteria in the gut and prevent their growth, by having a different culture media. Reduce your sugars and carbohydrates, giving instead, acids, buttermilk is good. The acid bulgaris bacillus, is used to good advantage; give plenty of boiled water, keep child in cool, well ventilated room, away from flies and filth, and above all keep the child out of the mother's lap, but instead

*Read before the Barren County Medical Society.

on a cot or pallet and sponge frequently to relieve temperature.

At this stage you may give such intestinal antiseptics as you prefer. The best I have used is

Rx.

Bis. sub. nit.....gr x
Sulphur gr. x
Pulv. Rheubarb gr. ii
Pulv. Pepsin gr. ii

Sig: Give 4 to 6 hours apart until bowels are checked and stools are dark.

Saline irrigations are of much advantage. They help support by absorption of water in in the bowel, thereby increasing elimination also to keep temperature reduced and quiet the nervous system. Some prefer bicarbonate of soda for this purpose, but I think salines have given me the best results.

3. Cholera Infantum. Nearly always attacks a child that is already sick.

Symptoms: Profuse watery stools, shrunk-en tissue and prostration.

Treatment: Supportive is all you can do. saline enemas, or better, hypodermoclysis to supply fluid to the tissues, hypodermics of brandy, or better morphine and atropine, gr. 1-100 and 1-200 each, according to age. The tincture opium and starch enemas will do much to quiet the bowel and stop the tenes mus.

4. Dysentery or Flux. *Symptoms:* Pain in the abdomen, stools of undigested food, slimy and of bad odor, or watery stools followed by blood and mucus. If the dysentery is produced by an ulcerative condition in the gut, you will have much pain just before and during the movement of bowels. The tenesmus is very marked and a great many stools in number in twenty-four hours.

Treatment: Purgatives of castor oil, enemas to unload the lower bowel, some form of opium to relieve the pain and quiet the bowel, local applications of mustard over abdomen will help very much.

Pyorrhea Alveolaris in Causation of Bronchitis and Asthma.—Cases are cited by Shivdas to show that pyorrhea alveolaris is a most potent etiologic factor in the causation of these diseases. In the cases in which the pyorrhea alone was treated, either a marked improvement or disappearance of the lung affection was observed, with the arrest or improvement of the pyorrhea. When the lung affections alone were treated without any attention to the pyorrhea, hardly any good results were obtained, except a slight temporary relief in the symptoms in consequence of the administration of soothing and anodyne remedies.

FUNCTIONAL HEART DISEASES; WHAT ARE THEY AND HOW TREATED?*

By BEN B. KEYS, Murray.

Our Medical experience teaches us that many people complain of really serious cardiac symptoms, who on the most careful objective examination show no trace of organic disease whatever. Strumpbell says that the number of imaginary heart diseases is decidedly greater than the number of cases of actual organic diseases of the heart. Functional heart disease then can be considered in many respects a cardiac neurosis, which may have numerous etiological factors.

First, we mention the mental conditions as excitement, emotion, depression, worry, and so on.

Second, from anemias, chlorosis, and such changes in the blood.

Third, the acute infectious diseases as influenza, diphtheria, typhoid fever, and so on, in which the toxic material in the blood irritate the cardiac accelerating nerves.

Fourth, dyspepsia, or indigestion in the alimentary tract, and those who commit dietetic errors, overeating, etc.

Fifth, the use of such stimulants as tea, coffee, tobacco, and alcohol which are injurious through the effects on the nervous system.

Sixth, the cardiac disturbances are found more frequently in the female sex, especially about the age of puberty and menopause and menses.

Seventh, any disease of the pelvic organs, as the uterus and ovaries.

There are a great many of these cases that are purely psychic, caused probably by the fear of a heart lesion and its consequences. The discussion of the disease by members of the family, the reading of medical pamphlets, advertising nostrums, etc., arouse a lively fear of becoming a victim to the dreaded disease.

In exophthalmic goiter we have a very rapid heart called tachycardia which is always present in these cases, due to paralysis of the muscles of the vagus nerve. Tachycardia may be due to some organic condition of the myocardium or may be due to some reflex irritation or paralysis of some center in the brain.

Marey has shown that lowering the blood pressure increases the rate of heart beat; the heart beats more quickly when its load is lessened. Hysterical and neurasthenical patients are usually troubled with rapid heart and palpitation.

Dieulafoy says the physiology of the nerves of the heart has been examined for an expla-

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nation of palpitation, and it is said the pneumogastric and the great sympathetic nerves are antagonistic. Inhibition of the pneumogastric or excitation of the sympathetic produces practically the same effects; namely, the acceleration of the heart beats. Hence all causes which lessen the action of the former or increase the action of the latter may give rise to palpitation. The paroxysms of palpitation are sometimes very distressing and painful. The heart beats violently as if it would burst the chest wall. Its movements may be much disordered (arrhythmia). The patient complains of cold hands, pale face, suffocation, and sometimes threatened with fainting and syncope. The pulse is not always in exact relation with the heart beat. The radial pulse may be normal while the ventricular contractions apparently are very rapid.

Bradycardia is a slowing of the heart beats which has several causes as follows: intoxication, jaundice, any tumor of the brain or of the cervical region, or tumor of the thorax, where pressure may be made on the pneumogastric nerve, all may produce this condition of slow heart. The cardio-inhibitory nucleus in the bulb may have some lesion that will produce this condition.

Treatment: We should make a very thorough examination of all of these cases and if possible be sure the case is one of functional heart disturbance and after careful study and examination you think the trouble is functional, then if possible determine the cause of the disorder.

Now the treatment depends largely on the cause, whatever may be the cause in each case, try to remove that first. You can do a great deal of good in nervous patients, by re-assuring them. The treatment in many respects is primarily psychic. Such treatment as the cold sponge every morning, or the hot bath, advice, encouragement and such medicine as valerian; tonic is usually sufficient.

DISCUSSION.

W. F. Boggess, Louisville: This question of functional heart disease is always an interesting one from the general practitioner's point of view, because by long odds a large number of the cases which the physician is called upon to reckon with are the cases of palpitation of the heart. Whenever a patient comes complaining of palpitation of the heart, I care not what the underlying factor is that causes the palpitation, he oftentimes gives the physician trouble. These people imagine they have heart disease and it is difficult to convince them of the difference between organic and functional heart disease.

The class of patients that come to us can be divided into those with ill-defined symptoms, where the symptoms are not referable directly to the heart-beat, but the patient is conscious of, or at

least imagines, that there is something the matter with the heart, and these neuroses we term the "cardiac neuroses."

Then we have neuroses of gastro-intestinal origin, of sexual origin, and of respiratory origin. They are entirely reflex in origin. Furthermore, we have the toxic neuroses that result from alcohol, tobacco, coffee and tea. These neuroses present well-defined symptoms, where the heart really shows some disturbance of function. The others are only in the patient's imagination.

In some cases we have well-defined symptoms of bradycardia and tachycardia and phrenocardia, but these cases are not so frequent as the first with the ill-defined heart symptoms.

As to the treatment of these cases, they require more thought, more investigation than any other class of simple cases that come to the physician. You must in every case be sure that you have functional heart disease rather than organic. You must eliminate organic disease of the heart. Many a case of functional disease of the heart is treated for organic disease of that organ, and many cases of exophthalmic goiter, with disturbance of the heart, such as tachycardia. The exophthalmic goiter is treated simply as a palpitation; the exophthalmic element is not recognized, and the patient goes on from bad to worse. Every patient that comes to you with an imaginary or true functional heart disturbance must be examined carefully, not only for differential diagnosis, but to assure the patient that you are going to exercise great care in your examination. It does not do these patients any good to simply say they have palpitation of the heart. That does not amount to anything: it is from the stomach, from drinking too much coffee, etc. But you must give the patient just as thorough and painstaking an examination as if you knew you had organic disease of the heart to deal with. The psychic effect of the examination is of inestimable value in your handling of the patient. You must treat the patient as a whole and ignore the heart unless you find something is the matter with it, and you cannot treat these cases lightly if you expect to do them much good. The treatment of these cases is the treatment of them as a whole. You must assure them from your thorough examination that there is no organic disease, and then proceed by attention to regime, by attention to methods and mode of living, and habits, to instruct these patients how to live, and how to overcome the centralization of their minds upon their cardiac condition.

It does not do these patients any good to give them digitalis which, oftentimes is harmful to them. How often a patient comes to you with functional heart disease, you give him an incomplete examination, you prescribe digitalis or some of the digitalis group of drugs and expect those drugs to cure the condition for which the patient consults you.

DUODENAL ULCER.*

By J. S. Lutz, Louisville.

Before I began to look up the subject of duodenal ulcer I believed that it was rather a rare condition but it is rated by some as causing about five per cent. of the sickness but on the other hand they all admit that to make a positive diagnosis is the next thing to impossible and the only way to prove a diagnosis is at the operating table or at autopsy.

We read quite a good deal in the medical journals, written usually by some surgeon, of the different operations for ulcer of the duodenum and nearly every one of them fall back on the assertion that *if* the general practitioner would recognize the condition earlier that they, the surgeons would save more of the cases, but you seldom read that the making of a diagnosis of duodenal ulcer is one of the most difficult things there is to reach a definite conclusion before it perforates. After that takes place I believe that any close observing doctor will recognize that some surgical condition has taken place and that an immediate operation is necessary. Duodenal ulcer is extremely rare in childhood, Kerly says that in all of his experiences he has only seen two cases of perforating ulcer in the newly born and he does not mention ulcer of the duodenum. Fischel in Pflaunders and Schlossman says that it is extraordinarily rare in childhood and that the diagnosis is only conjectural, he refers to a case of Vanderpool's of a child of ten months who suddenly developed bloody stools and has hematemesis the autopsy showed an ulcer the size of a bean lying close to the pylorus in the posterior wall of the duodenum. Holt makes no mention of duodenal ulcer. This is very convincing evidence that if these men who see so many autopsies and do not find duodenal ulcers that it is very rare in children. All of our text books agree that ulcers of the stomach and duodenum are of the same cause but that ulcers of the duodenum is more frequent in men than women and just the reverse hold true of gastric ulcer, they all write that pressure seems to have some factor in causing ulcer and nearly every one mentions burns of the body causing them, this may be a fact but it does not look reasonable to me that burns of the body should have much effect on the lining of the gut, in fact this seems to me like the recent works on *Materia Medica*, the writers just hand down what one writer has said to another. I never found one give a reason why this should occur. Thompson on Clinical Medicine, says that he has counted thirty-six different theories by sixty-two authors, with the agree-

ment on any one statement numbering only nine.

The symptoms of duodenal ulcer are given as, hyperchlorhydria, blood in the stool, pain two or three hours after eating, jaundice occasionally, vomiting not so frequent as in gastric ulcer, violent gastralgic attack and tenderness to the right of the median line in the epigastric region and one other that is very important, Thompson calls it "Hunger Pain" and this is one of the things that cause us a great deal of trouble in the treating of these cases for they are hungry and do not like to give up their three meals a day.

I found one authority who was fair enough to say that he has been able to diagnose duodenal ulcer in only five cases. That is enough to convince me that the diagnosing of duodenal ulcer before it perforates is a mighty uncertain problem and I don't think it necessary to call a surgeon for an exploratory operation every time that a patient comes to me with a bellyache and some of the above named symptoms for we know that a great many of these cases are nothing but intestinal indigestion on the other hand I think we should watch closely all cases that do not get relief by a thorough cleansing of the alimentary tract and rest and if the symptoms of perforation show, get busy and get the best surgeon and get him quick.

I have had a few cases which I believed to be duodenal ulcer basing my diagnosis upon the occurrence of pain about two or three hours after eating, and the relief of pain by eating of something, even a small piece of toast, which of course caused the pyloric sphincter to close and to stop the acid contents of the stomach flowing over the tender spot. They had an acutely tender spot about two inches below the ensiform cartilage and about one inch to the right of the median line, very little change in the appetite, patients were all constipated. I did not have the stools examined for occult blood but was unable to detect it with the eye. I treated these two cases by rest in bed with either an ice bag or hot water bottle which ever gave the most comfort to the abdomen, a very light diet of dry toast and milk and all the water that they wanted I found that it was necessary to give them morphine to relieve the intense pain, the bowels were moved with castor oil and enemas, bismuth subnitrate was given in doses of 30 grains every four hours and a half ounce of milk of magnesia about three times a day. I do not believe that silver nitrate does good in these cases like it does in gastric ulcer. Dr. Hort recommends the giving of horse serum by the mouth in doses of thirty c.c. a day if the pain is severe or there is hemorrhage he gives sixty to eighty

*Read before the Muldraugh Hill Medical Society.

c.e. twenty-four hours, he gives this serum in milk and says never to give it on an empty stomach. The greatest trouble that I have had with these cases is to keep them in bed and to keep them from eating.

REPORT OF A CASE.

Richard T., age 27 years, family history negative except one sister has tuberculosis, no venereal disease of any kind and has never had a serious illness of any kind. Well developed young man weighing about 125 pounds, five feet and five inches tall, has been working on an ice wagon all summer, his clothing being wet nearly all day and getting his meals irregularly, he had been in the habit of drinking a great deal of very cold coco-cola, his appetite has been poor for some time, bowels were constipated.

October 10th, he came to the office complaining with pain all over the abdomen; said that he had eaten sauerkraut the night before and suffered all night. I gave him a calomel purge and some pepsin and advised him not to work the next day. I could find no spot of tenderness or rigidity at this time.

October 12th, he came to the office with no improvement in the degree of pain and was hungry all the time, no belching or vomiting, tongue fairly clean; on examination I found a tender spot about one inch to the right of the median line and about one and a half inch below the ensiform; bowels were constipated; told him to go home, get in bed and take an ounce of castor oil and not to eat a thing for twenty-four hours.

October 15th, his pain had not let up any. I gave him salol and morphine and told him to repeat the castor oil and to only eat toast and milk.

October 16, 17, 18 and 19, no change in the symptoms and it was necessary to continue the morphine; during all of this time his pulse was 60 to 70 and the temperature was normal, and we were never able to see any blood in the stool, and never had any vomiting.

October 20th, he came to the office about 3:45 p. m., suffering intensely (you see how he obeyed orders to stay in bed), his pulse was 66, temperature and respiration normal, the abdomen was soft but very tender in the epigastric region to the right of the median line.

At 5 p. m., I was called to the house and found him in agony with cold nose and hands, abdomen as rigid as a board and that awful, anxious expression on his face, that any one could tell that he was in a desperate condition. I immediately called Dr. Willmoth, who saw him at 5:45 and advised immediate operation. He was taken to the infirmary and the abdomen opened at 7:30 a perforated ulcer of the

duodenum about one quarter of an inch in diameter and about one inch from the pylorus was found. Dr. Willmoth will tell you of the operation.

The patient made a perfect recovery and is working as railroad switchman every day and says that he is feeling fine.

TREATMENT OF TUBERCULOSIS.*

By T. J. TOWNSEND, Owensboro.

When a silent destroyer of the human race is permitted to run its deadly course, those of us who would attempt to stop its fatal progress are not unmindful that a cure for tuberculosis can only extend, just a few years, the lives we are striving to save. Other diseases than tuberculosis will take them away; in no case can we expect to evade the certain penalty of death, that awaits us in the end.

Shall we admit that when the infections of tuberculosis find entrance in the lymph currents of the human body, that the harmony of vital chemistry is seriously interrupted; that the powers of resistance to disease is weakened; that wasted forms are in evidence; and that pallied faces stare us in mute silence, pleading for mercy and for relief.

Sarcina ventriculi is, perhaps, one of the most interesting vegetating plants that has ever been discovered in the ejected contents of a human stomach. The presence of this growth is of frequent occurrence, with all persons who engage excessively in eating tainted food, especially shall we include the unwholesome kinds that may lead to indigestion.

The fungoids have peculiar affinity for human tissues; it will produce excoriations or aphthae, on the lining membranes of the mouth. Further, it is known that different individuals of the same species of fungi possess the power of reproducing themselves in dissimilar styles in the manner of fructification; or the same germ, at different periods of development, may fructify in two or more varieties of growth entirely different in appearance to the parent.

In the birth of fungoid generations, we are also reminded that seasonable influences should not be lost sight of in the production of infectious parasites, and that all types of animal creation, including the little glow-worm, the fly, the reptile, the bird, the beast, the monkey, and the man, are surely exposed at some time during life to the baneful influences of germ disease.

We have heard, or have read it somewhere, that the smallest microbes cannot escape the punishment of death by infectious or contagious disease. If this can be true then the greatest foe to the human race is a micro-

*Read before the Daviess County Medical Society.

scopic vampire, that revels with delight in the closed tenements of the human body. Without the protection that immunization affords, and the power of resistance granted to us in the ways of elimination, and the help of vital chemistry that will render innocuous the subtle poisons of a dangerous foe, we would surrender these mortal tissues to early made graves, in the dawn of useful life.

For the relief and cure of tuberculosis, the best treatment is fresh air; pure water; sound food; cheerful surroundings; ventilated apartments; composing sleep; food that is not compounded, or prepared with sugar; the daily cleansing bath, wearing apparel adjusted to suit the weather, or the climate in which we live; the removal of diseased or decayed teeth; ablation of not less than one-third, or one-half of the elongated uvula, in all cases of severe cough, that it attended with symptoms of retching, nausea, or vomiting.

All expectorated matter, or sputum should be expelled and received on pieces of soft paper, that should be promptly crumpled, bundled and burned.

The swallowing of expectorated matter is a loathsome habit that is often indulged in by many sick persons; this filthy practice should be promptly condemned in the outset as being positively dangerous.

The hair and the scalp of the patient should be cleansed with water and castile soap once or twice weekly.

For the hectic fever, attacks of weakness or exhaustion, a pint of water should be administered for its stimulating action, and the same to be repeated at regular intervals of one hour, till effective.

During the cold disagreeable winter days, a dry friction rub, administered with some exertion with a crash glove, or the crash towel in the hands of a third person, will not only contribute grateful pleasure to the patient, at a needful moment; but its general effect is truly tonic, imparting as it does, an agreeable sensation of warmth to the skin, also to the power of muscular strength, that is much needed by this yearning class of in-door sufferers.

The consuming fever of tuberculosis, if raging unduly high at any time, should merit, and receive the same tender watchful service that is given to individuals afflicted with typhoid fever.

The striking resemblance of the typhoid bacillus to the bacillus of tuberculosis is revealed to the light of science; they are photographed on films to a state of perfection, that we can no longer doubt the action of a similar poison that operates with equal violence on the tissues in which they have chosen to exercise dominating power.

Nor can we hope, ever to achieve the goal

for which we are striving to attain, save in a line of safety that is assured us in the traveled ways of experience, that is accorded serious cases of typhoid; the treatment of which is successfully accomplished on a simple diet, free from the dangers that attend the ingestion of unwholesome food.

The dietary of tubercular patients should be watched with an eagle's eye; with the mad cravings of an incontrollable appetite, the morbid passions of the stomach becomes a steward of domestic affairs, it will revel in the sweetness of vanished years to feast again on forbidden things; and all promises are broken, to be renewed and fulfilled at a future day.

Only the presence of an ever faithful nurse can protect and guard the hapless patient from the menacing dangers of infecting food.

The treatment of tuberculosis involves the gift of patience and of industry, as the fever may last for several months; and for its treatment the daily use of iron, thymol, guaiacol, and salicin should be given at the time of eating, this will insure its conveyance into the lymph channels, wherein is found the toxic poisons of the dreaded disease.

While suggesting the aforesaid blood tonic, it is not my purpose to offer a specific treatment, nor shall I attempt to standardize a cure for tuberculosis. Those who have successfully treated typhoid fever, may be assured equal results in the way of recovery; the basis of treatment is practically the same.

I have always attached much importance to diet, in disease, only. My province is to prescribe for sick people, those persons who claim to possess good health are not objects of care and attention on my part; only the unfortunate sick are required to pursue the narrow ways; well people should be permitted to exercise the rights of sovereignty as regards the matter of food and drink; to interfere with the habits that produce disease, would prove disastrous to the medical profession; Othello's occupation would be no more.

Breathing exercise, daily conducted with prolonged effort on the part of the patient, should be attended with the deeper inhalations of the best air; this practice is, perhaps, the most useful method for restoring the lost power of pulmonic expansion, and the most convenient time for engaging such exercise is within the hour before eating, when the patient's stomach is practically empty.

Little effort is required for securing suitable material for nourishing this class of patients as the dietary is limited to a very few things. Sweet milk, toasted bread with sound butter; corn meal mush with butter or milk; or oat meal, salted with milk or cream; a small piece of fresh lamb, or beef, a saucer of well cooked rice; Irish potatoes, and a few other simple

products of the market, including a few choice varieties of ripe, well-matured fruits; embraces about all that is required to sustain the patient till recovery.

Intestinal toxemia is one of the predisposing causes of tuberculosis; relieve toxemia, prevent its recurrence by the use of wholesome food and the proper administration of intestinal antiseptics, and you have a solution of a perplexing problem.

Have the patient to consume not less than two quarts of sweet milk every twenty-four hours, with a needful supply of fresh butter and toasted breads, conserve the energy of the alimentary digestive tract, by causing the patient to lie down and to keep still for exactly one measured hour after each regular meal; see that this law is rigidly enforced, from which there shall be no appeal. Noting a number of my own patients who have acted on this advice; taking one hour's rest after each meal, on a lounge, they have had restored to them, in three months time, the lost energy of a dozen years.

INGUINAL HERNIA.*

By R. L. SCHROADER, Owensboro.

It is estimated that from three to five per cent. of individuals are ruptured, including all ages, both sexes and all walks of life. The majority present the inguinal type, a form, which in addition to reducing the earning capacity from fifteen to fifty per cent, carries a heavy death rate from strangulation.

Except in the very young or early cases where the tissues are as yet undeveloped and capable of great adaptation, the cure by mechanical means is out of the question. In many of these cases, even, the not infrequently associated condition of retained or undescended testicle renders it impossible or unwise to use such means. That a cure of these cases can be affected by such means as needling the ring or the injections of paraffin is possible in a limited number and the widespread indulgence of such methods can result only in loss of prestige for the profession and injury to the public. Modern surgery offers a cure in ninety per cent. of these cases with a detention of but eight to twelve days and a minimum danger to life. Children from one year up stand the operation well and the technic is simplified because of the slight alterations in the contour and relation of the structures forming the inguinal canal. Old age or hernias of long standing, from twenty to forty years, present obstacles to an effectual cure, otherwise the radical operation is the only rational procedure and should be advised in every case.

To comprehend the surgical treatment of this condition it is essential to thoroughly understand the structural arrangement of the inguinal canal and the various types of hernia that may present. It must be remembered, first; that the neck of an inguinal hernia lies above the pubic spine, while in femoral hernia it lies external to the spine or just below the internal end of Paupart's ligament. Second: that it is vital to distinguish between an oblique and a direct inguinal hernia. The former emerges from the abdominal cavity through the internal ring and traverses the entire length of canal. Its coverings are the same as those of the spermatic cord and the neck of its sac lies above and external to the deep epigastric artery. A direct hernia pushes out through the floor of Hesselbach's triangle and thus its coverings are different. Third: Is the hernia of acquired or congenital type? In the congenital type, the funicular process having failed to obliterate, the hernia lies along side the testis in its tunic or where the upper portion only remains patent, the hernial sac may lie along side of or be encysted in the tunica vaginalis testis. In the acquired type the sac may consist of coverings formed as the hernia forced its way along, or the coverings may be the same as in the congenital type—the funicular process remaining patent but the hernia not occurring until late in life.

The essential features in the radical cure of hernia consist in first: the complete eradication of the sac, and second: such closure or remodeling of the inguinal canal as any divergence from normal may indicate. Based upon this principle many are the recognized procedures that have been established to meet the conditions presenting in individual cases. To follow implicitly only one technic would be a mistake and to determine just what method to employ in a given case requires a certain amount of judgment based upon experience. In young children and early cases the complete eradication of the sac is the essential feature while in older persons or long standing cases it is not only necessary to thoroughly eradicate the sac but the reconstruction of new canal to give normal obliquity and proper valve like action is the essential.

TECHNIC OF OPERATION.

First: The incision should be long, extending from just above site of internal ring down to the spine of pubis. An incision thus properly made in the beginning will insure a good exposure of the entire field to be explored and enable the operator to proceed rapidly with the subsequent steps of the operation. A small incision, except in infants, tends only to complicate matters, necessitating delay and embarrassment in that it will later have to be

*Read before the Daviess County Medical Society.

enlarged or prevent the proper execution of the most essential steps of the operation.

Second: The skin and fascia are carefully retracted to expose the fascia of the external oblique. Care should be taken not to extensively undermine the fat in carrying out this step as the resulting dead spaces are a source of danger. The external ring is cleared and a grooved director passed beneath into canal. The fascia is split upon the director to site of internal ring. If the operation is being performed under local anaesthesia this step should be reversed. The fascia is cleared in its upper aspect, picked up between thumb forceps, and opened at site of internal ring. The flaps are then laid open and the ilioinguinal and iliohypogastric nerves found and blocked. The fascia is now split down to the external ring.

Third: By retracting the edges of the external oblique the canal and its contents are freely exposed. With a knife handle, or preferably a piece of gauze over index finger, Poupart's ligament is freed the length of the canal.

Fourth: This step will depend upon conditions present. If operating strangulated hernia, the coverings of the sac should be split and the sac freed in its entire circumference from its coverings and the cord before opening it. In simple hernia it is often hard to carry out this step and the operator will have to free the sac as best he can to meet the conditions present.

Fifth: The sac being identified and freed from its coverings, the further steps of dealing with it will depend upon the type of hernia. If acquired type it is usually an easy matter to isolate and free the sac from the cord. If congenital it should be cut above the testicle leaving enough to cover same and the balance separated from the cord or closed with purse-string suture well up in internal ring. The stump of the sac should recede well behind the muscles forming the internal ring.

Sixth: The next question concerns the cord and the closure of canal. In all cases except the very young it is advisable to transplant the cord. The latter is held out of the way by a piece of gauze passed beneath, and the closure of the canal begun. The muscles at site of internal ring should be carefully examined and identified. A stitch is then placed so as to close structures above cord and another immediately below thus bringing tissues close enough together to just permit the passage of the cord. These stitches are taken in the internal oblique and transversalis fascia. The internal oblique and conjoined tendon are next sutured to the under surface of Poupart's ligament by a series of interrupted sutures. In cases of long standing or direct

hernia it is difficult or impossible to close lower end of canal muscle. In these cases the sheath of the rectus should be exposed and a piece large enough to fill in the defect slid over and attached to the outer surface of Poupart's ligament and the external oblique closed by overlapping.

Seventh: The cord is reimposed upon its newly created floor; all fat and superfluous tissue removed from the wound and hemorrhage thoroughly checked. The split fascia of the external oblique is brought together over the cord by continuous suture reinforced if necessary at site of external ring and tight enough to just permit the passage of the cord.

Eighth: Fat should be sutured by a continuous suture of plain catgut and wound closed. Drainage is not indicated if hemorrhage has been thoroughly checked and the technic aseptic.

Ninth: A well fitting spica bandage should be applied and patient removed to his room. The after treatment will depend upon the reaction of the patient. In many cases it is not necessary to examine the wound or change dressings before the fifth or even the seventh day when the wound will be found dry and almost healed. The patient may leave the hospital on the seventh or tenth day wearing a well fitting spica bandage which should be kept on several weeks longer.

REPORT OF CASE.

Case 1. Mr. H. C., age 29, robust build; in good condition except for direct hernia of eight years standing. No truss had been worn and the hernia was out constantly when standing.

Operation under ether, long skin incision down to external oblique fascia, external ring found to be wide and inelastic, sac was isolated easily and the neck sutured, cord freed and transplanted. It was impossible to affect good closure of the lower floor of the canal on account of the tenseness of the tissues and the thinning of the muscles. This defect was closed by sliding a piece of the rectus sheath into the wound and over-lapping the fascia of the external oblique. Recovery uneventful and cure effected.

Case 2. Male baby, age two years, hernia of right side into scrotum associated with undescended testicle which could be felt in the canal just above site of external ring.

Operation: Under chloroform small incision was made over hernia which had not spontaneously reduced. Sac was isolated and opened, contents, omentum, enveloped in which lay the testicle. Omentum was replaced without difficulty; sac cut above testicle leaving enough to cover same and balance stripped from the cord to site of internal ring. The cord was freed carefully and, by gently pulling, the testicle could be brought down to

the scrotum. The canal was closed without transplanting the cord and the external oblique united. The testicle lay close but not tight up against the newly formed external ring. Wound closed without drainage. Recovery uneventful with exception of considerable swelling to the testicle which gradually subsided. Patient seen two years later. Testicle was found normal in size and while held high up against external ring seemed to have plenty of room.

Case 3. Mr. M., age 56, hernia of right side into scrotum. Nineteen years before he had been kicked by a mule soon after which the hernia appeared. Had worn truss for several years. Several years before seen by me he had been injected with paraffin upon three different occasions by a rupture specialist without success.

Operation: Under local anesthetic, long skin incision, external oblique split above site of internal ring and search for nerves begun. Tissues were found all matted together with adhesions and lumps of paraffin found scattered throughout. On account of this it was impossible to identify and block nerves properly. Patient was given a small amount of chloroform and the dissection continued. The sac could not be completely isolated but such as could be found was excised. The canal was closed without transplanting the cord and the wound closed without drainage. Recovery uneventful and patient left hospital the eighth day. Following the operation all went well with an apparent cure until five months later when the patient stated that in getting out of a bath-tub several days previously he felt something give and upon examination he noticed a swelling at site of internal ring. When seen by me this hernia was the size of a goose egg but did not come down into the scrotum. Operation was again advised and accepted.

Operation: Under ether, incision was made one quarter inch below and parallel to the first incision. External oblique fascia split and laid open. Hernial contents had receded into abdomen and great difficulty was again encountered in identifying the structures and isolating the sac. Several more lumps of blackish material were dissected from the tissues, this was undoubtedly the paraffine previously injected. The cord and sac were finally isolated and freed; the sac excised and the cord transplanted. In spite of the long standing of this case and the original and subsequent trauma the tissues were not hard to approximate. Wound closed without drainage. Recovery uneventful and no recurrence over one year after operation.

Case 4. Mr. J. P. H., age 18; history of undescending testicle until 14 years of age.

Hernia developed gradually from that time on. Diagnosis congenital oblique inguinal hernia.

Operation under ether long incision down to external oblique fascia. External ring exposed and fascia split length of canal. Sac isolated and opened. Contents, omentum, returned to abdomen. Sac excised except enough to cover the testicle. Cord transplanted and wound closed without drainage. Recovery uneventful and no recurrence in two and one-half years.

Case 5. Mr. J. L., age 40; hernia of twelve years' standing; strangulated five hours.

Operation: Under local anesthetic; long incision was made extending from above internal ring well down on scrotum. Sac easily isolated and opened. Contents: omentum and several coils of intestine. The latter were distended but of good color and were at once replaced. The omentum was highly organized and adherent to sac. Both were excised, and the wound closed without drainage. Cord was transplanted. Except for considerable swelling of the testicle recovery was uneventful. No recurrence in four years.

Case 6. Negro baby, age nine months, congenital hernia, strangulated twelve hours.

Operation: Under ether short incision over protrusion. Sac in part exposed but incision had to be enlarged freely before it could be isolated. Sac opened at lower end and found to contain several coils of greatly distended intestine. These were enveloped in cloths wrung out of hot normal salt solution until the color indicated good condition. Constriction at neck of sac was then cut; sac freed from cord except at lower end where enough was left to cover testicle; bowels replaced, cord transplanted and wound closed. Recovery uneventful.

The above cases are reported to emphasize certain essential points that can best be brought out in this manner. Thus, in case one, a hernia of only eight years' standing, but with no mechanical support, the tissues were greatly thinned and so tense as to render it impossible to effect closure of the lower end of the canal. In such cases it is advisable to slide over a piece of the sheath of the rectus muscle to fill in the defect. Case two suggests a discussion of the technic to be employed in cases of hernia associated with retained or undescended testicle, and the best age to operate these patients. In case three we note the pernicious effect of paraffin injections. Lumps of this substance were found scattered throughout the tissues and the adhesions so dense as to render it difficult to carry out the various steps of the operation. In spite of this, however, a cure had not been effected and the nature of the canal as disclosed at operation was such as to indi-

cate no amount of paraffin could have held this rupture. Recurrence in this case was due to a failure to properly isolate the sac and transplant the cord at the first operation. Case five, a strangulated hernia done under local anesthesia, novocain and adrenalin solution. Patient complained of no pain except during slight traction on the intestine previous to its replacement. In elderly patients with strangulation of considerable duration, local anesthesia is the method that offers the least danger and gives the best results. The bowels can be covered with gauze wrung out of hot salt solution and watched for hours, if necessary, before replacement or deciding the next of the operation.

LIGHTS AND SHADOWS.*

By MORGAN TAYLOR, Glasgow.

Doctor, dear doctor, come home with me now.

The clock in the steeple strikes one,
And poor little Bennie is sick as a hoss—

We want you to come in a run.

Yes, Bennie is bad, Doctor Brown is away,

And all the other doctors are sick,

And Bennie is cramping, and awfully hot,

And he's swelled as tight as a tick!

Doctor, dear Doctor, come over again,

The clock in the steeple strikes two;

For Bennie's no better, indeed he is worse,

And he has been calling for you;

He wants you to treat him like good Doctor
Brown

With wafers so sweet and so red,

He kicks off your poultice; and won't have
your drops,

Nor cold water over the head.

Doctor, dear Doctor, come quick as you can!

The clock in the steeple strikes three,

Poor Bennie is dying, his pulse nearly gone,

His condition is awful to see;

He refuses the wafers, and spits out the drops.

A spasm is now coming on!

Oh, maybe there's something has been over-
looked,

Come quickly or he will be gone!

Doctor, dear Doctor come again if you please,

The clock in the steeple strikes four,

Bennie's fever is gone, he has dropped off to
sleep,

But he has a strange sort of snore,

The wafers and enema worked like a charm;

He's better, but Oh, will it last?

Please come right away, and examine him
well,

And see if the crisis is past.

Doctor, dear Doctor, little Bennie is well!

Another bright star in your crown,
I shall always thank heaven for sending you
here

In place of that old Doctor Brown.

And when I am able, how happy I'll be

To pay every cent of the bill,

But for you, little Bennie would now be
asleep

In the graveyard over the hill.

Doctor, Oh, Doctor, stop sending those duns,

Your account is now out of date;

I *may* pay it some time, but the more you dun,

So much the longer you'll wait.

Doctor Brown was surprised that you charg-
ed me so much

Your services being so small,

Now Doc, stop your dunning, and give me a
rest,

Or derved if I pay you at all.

The Tuberculosis Problem.—The fact that the anti-tuberculosis campaign has not brought results as favorable as might have been expected is due to the slogan "Tuberculosis is an infectious disease," which overlooks the fact that the disease is acquired in childhood and its manifestation in the adult is only a lighting-up process. Isolation of all persons with tubercle bacilli in the sputum would be effective prevention, but this cannot be attained. Hence, the only hope lies in childhood prophylaxis. Since tuberculosis infection occurs in early childhood, and perhaps in utero, all attempts at prophylaxis are in reality therapeutic. Dr. Karl von Ruck has prepared a vaccine consisting of the watery extracts of the tubercle bacillus which has been given by repeated injection to young children, until their serum shows bacterial power against the bacillus. The children gain in weight and appetite and do not develop active tuberculosis. The largest number of experiments have been carried out on animals, using some as controls. In the case of animals, some failures were observed, and these have been explained by the existence in the animals of a pseudo-tuberculosis, which interferes with the experiment. The vaccine has also been administered to cattle with good results, and this may later solve the problem of the tuberculous cow.—The Tuberculosis Problem, S. H. von Ruck, *Lancet-Critic*, September, 1915.

Tests to Control the Hearing.—Gosset mentions a number of means with which simulation or exaggeration of deafness is readily detected during lip reading exercises.

*Read before Annual Meeting of the Barren County Medical Society, July 17, 1916.

ACUTE BRIGHT'S DISEASE.*

By S. M. HOPKINS, DeMossville.

There seems to be a difference in opinion among the older authors as to the exact definition of the disease described by Dr. Bright and afterward named in his honor, hence it seems more appropriate to speak of the disease as a nephritis, using the proper adjective to describe the different forms of the disease. Acute diffuse nephritis is the term, commonly employed, which indicates that the disease is an acute inflammation of all the anatomical elements of the organ. This form of nephritis is spoken of by various writers as acute tubal, exudative, glomerulitis, catarrhal, parenchymatous, desquamative and groupous nephritis. The acute form of nephritis is much rarer than the chronic. It is claimed that many of the so-called acute cases are acute attacks engrafted upon a chronic form of the disease.

Clinically it is impossible to differentiate between the different varieties of acute nephritis, which fact is not important as the treatment in all forms is about the same.

Etiology: Most cases of acute nephritis are due to a direct irritation of the kidneys by some toxic substance brought to them by the blood. Any of the acute infectious diseases, or specific fevers, may be a cause. Scarlet fever heads the list, with diphtheria possibly second, typhoid fever, acute rheumatism, blood poison in all of its forms, in fact, any disease due to a specific poison may be causative. The habitual use of alcohol in any form is causative; exposure to wet and cold, claimed that many of the so-called acute cases. Chemical agents, as turpentine, cantharides, carbolic acid, salicylic acid and potassium chlorate may set up a nephritis.

The nephritis of pregnancy is due to renal engorgement caused by pressure, also to a poison circulating in the blood.

Symptoms: The onset is usually rather sudden, nausea and vomiting, chills, fever and pain in the back. Dropsy is also an early symptom, especially puffiness of the face and lower eye-lids and in children there may be convulsions. The urine becomes scanty, sometimes almost suppressed, high in color and specific gravity. The anasarca is often marked and there may be effusion into the serous cavities. The pulse is hard and tense. There may be desire to micturate often, with burning and vesical tenesmus. As the dropsy increases the penis, scrotum and labia become enormously swollen, the patient looks pale and anaemic, cardiac hypertrophy with second aortic sound accentuated, may be present. Uraemic symptoms with headache, backache,

vomiting and convulsions may appear at any time. The clinical courses in other cases run a much milder course than that described above and end in complete recovery.

Diagnosis: With the characteristic symptoms of acute diffuse nephritis, viz.: headache, fever, restlessness, muscular twitchings or convulsions, nausea, vomiting, a tense pulse, dropsy and anaemia, tube casts and albumen, in part, or all present, the diagnosis should be quite easy.

I think most of us in the country are almost criminally negligent with our obstetric cases in our neglect to insist upon repeated specimens of urine for examination, and especially with the primipara. No doubt many cases of puerperal convulsions are preventable by proper supervision and treatment.

Prognosis: In the cases following exposure to wet and cold, the prognosis is usually good, while it is more grave in the scarlet fever cases. In the cases complicated by pregnancy, typhoid fever, diphtheria and the milder infectious diseases, while the dropsy, nervous and urinary symptoms appear grave, the larger proportions of the cases recover. In cases with severe uremic symptoms the prognosis is bad, as is the acute cases complicated with the chronic form of the disease.

Treatment: Absolute confinement to bed in a warm room, and covered with blankets to keep skin active, are indicated. In the milder cases, milk, butter-milk, gruels, water, and cream of tartar lemonade are given.

In the severe cases with dropsy it is best to withhold for a few days all food and liquids, except very little water, thereby giving the kidneys as nearly complete rest as possible; although this is a point about which authors are divided, some preferring to try to flush the kidneys with liquids. The skin and bowels should be kept active by diaphoretics and cathartics. Calomel, salines and compound jalap powder are the best cathartics. Hot fomentations to loins are indicated for pain, and hot water baths and packs may be used for their diaphoretic effect. The familiar corn sweat is a convenient method of accomplishing the same end. Should the skin refuse to respond to these measures, as in uremia, perspiration may be started by hypodermic use of pilocarpin in 1-8 to 1-6 grain doses, then continued by the hot applications.

Uremic convulsions that do not cease under the above treatment should be treated by venesection. Their return may be prevented by rectal use of chloral and potassium bromide. Increased tension of pulse and muscular twitchings calls for the use of nitroglycerin and chloral, or possibly morphine. In the later stages mild diuretics, infusion of digitalis and iron tonics are indicated.

*Read before the Pendleton County Medical Society.

CAMP SANITATION OF KENTUCKY TROOPS.*

By R. C. ADAMS, Salyersville.

(Captain, Medical Corps, K. N. G.)

Camp sanitation is a child of comparatively recent birth. Prior to our recent war with Spain but little heed was given to the arrangement of a military camp, or to its sanitation after it was established. The needless loss of life in concentration camps during 1898, awakened the military authorities to a realization of the deplorable prevailing conditions, they set at work with commendable promptitude to bring about a change, and the change so wrought has been little short of marvelous.

The old time military surgeon did not appreciate, seemingly, that a man dead from typhoid, dysentery, yellow-fever or malaria was just as effectually dead, so far as his value as a soldier was concerned as though he had "met up" with an ounce of lead.

Apparently, they supinely waited until the trooper contracted disease and then tried to cure him, instead of endeavoring to prevent the disease that may have the hold on the victim.

He looks upon every case of typhoid fever as a reflection upon his sanitation and soundly berates himself for some negligence, even though he is not berated by his superior in rank.

In consequence of the rigid rules followed, all looking toward a clean camp, and the constant reminding of the company commanders of their duty toward the men under them with regard to looking after their personal hygiene, have the men bathe frequently especially after a hike, they should see that the men do not sleep in their uniforms, have the feet cared for and frequently bathed, all this will improve the personal hygiene of the men in camp.

Out of several thousand troops, both regular and militia that may occupy the same camp grounds there should not be more than a half dozen cases of typhoid fever if any, nine out of ten cases that develop in camps of late are usually brought into camp by some of the enlisted men, and not contracted in camp at all.

HOW DISEASE IS PREVENTED FROM SPREADING OR INFECTING THE MEN.

Water is one of the most important points for the surgeon to look into.

The disposal of refuse and excrement.

The refuse cooking should be placed in a

galvanized-iron covered can, one for the liquid and one for the solids; each morning the cans containing the liquid and solids should be hauled some distance from camp and dumped and burned or it may be burned in the kitchen incinerator, which may be constructed thus: dig a pit four feet long, two feet wide and eighteen inches deep, cover the bottom with loose stones, keep a constant fire and you can easily burn up all the garbage that may accumulate. Not only should the refuse garbage be burned, but all refuse from the camp itself, the manure and straw from the stables, in fact everything that accumulates about a camp should be saturated with crude petroleum and burned.

Recognition that human excreta are the most potent source of infection, especial care should be taken to prevent the dissemination of disease from this source by means of flies, this can be done by the installation of latrines both for the companies and officers, for the enlisted men two or three latrines should be constructed for a regiment, they should be constructed or dug four feet wide, five feet deep, and ten feet long, covered with fly-tight seats having automatically falling lids. A galvanized iron trench terminating in an iron pipe leading into the vault should be supplied as a urinal. Each morning this latrine should be burned out with straw or dry shavings saturated with crude petroleum, the seats are so constructed that they can be turned back easily and fresh earth can be thrown around the openings to prevent the flies from getting into the latrine.

Two gallons of crude oil will, with a few handfuls of straw burn out a pit or latrine almost perfectly clean, after the fire has burned out a few shovelfuls of clean dry dust may be thrown into the pit and spread over the bottom, a quart of crude oil should be poured into the urinal, always banking up around the seat after replacing with fresh dirt.

Personal care of men should be strenuously looked after. Each day the conical tent should be rolled up around the bottom, the bedding and clothing spread out and aired, the men should be induced to perform their ablutions at a stand placed somewhere centrally in the company street, a slight pit should be made and this well filled with loose stone. This wash stand, too, should be treated to a bath of crude oil each day.

The troops should be discouraged from throwing waste water about on the company streets, and should any one be caught or detected performing any of the calls of nature in a place other than that provided, he should be given a court marshal.

I myself have in a number of cases seen the enlisted men urinating in and around their

*Read to the Medical Corps, Kentucky National Guard, Fort Thomas, July 15, 1916.

tents, sleeping with their clothes on, never changing underwear or hose from the time they leave home until they return to their home station. Such sanitary conditions as this should be looked after by the company commanders.

Sick call is generally attended by a large number each day while in camp, ill-fitting shoes, leggings and lack of personal hygiene is primitive cause of a crowded sick report each morning. Men should be instructed with regard to their feet, their food, bathing, etc., all efforts bent toward keeping the men well, instead of curing them after they become sick.

It must be remembered that the soldier comes into intimate contact with civilians as he does with his comrades. He visits the homes of civilians; places of entertainment, both private and public; eats the same food and drinks the same water and milk supply; is exposed to the same chances of infection from flies, contact, food and drink as the civilian, and while living on a higher plane hygienically than the civilians, in average circumstances in this country because of the intelligent paternal interest of the authorities, yet he contracts disease (measles, mumps, scarlet fever, influenza and others) just as he did small-pox and typhoid fever. Why are these diseases practically no longer exist among our soldiers?

Vaccination against smallpox and typhoid fever are the active agents in banishing these diseases from armies that thoroughly and efficiently use these measures. This measure is now in use in the armies of Great Britain, France, Germany and Austria, and is probably being used in the armies of Russia and Italy and should be used on every member of the National Guard. It may be of interest to add that during the first six months of the year 1915 only one case of typhoid fever was reported in the armies of the United States.

I believe that if we had our guard properly vaccinated we would never have a case of typhoid develop in our ranks.

Total Heart Block.—Atropin had no appreciable influence on the total heart block in one of Marui's two cases. In the second the ventricle beat increased by eight beats, showing that even with total heart block the vagus may yet exert a certain control over the ventricle. Injection of epinephrin in the first case, a working man of 39, induced the bigeminy picture; the extrasystoles with the total heart block are ascribed to stimulation of the accelerator nerves. Under the influence of the epinephrin the pulse became accelerated and at the same time the rare phenomenon of interference was observed. There was evidently pronounced sympatheticotony, with extreme susceptibility to epinephrin.

NEWS ITEMS AND COMMENTS

A committee from the City Council of Owensboro has been appointed to sell the property known as the eruptive hospital, the funds to be used for the purpose of a site for the \$20,000 tuberculosis sanatorium, given to the city of Owensboro by Col. E. G. Buckner, of Wilmington, Del., a former citizen.

Dr. Cyrus B. Wood, who went to Louisville April 1 to take a position as chief resident physician at the Louisville city hospital and resigned the last of June to join the Field Hospital Company of the Kentucky National Guard, recently passed preliminary examination for appointment on the Medical Corps of the United States army, and will go to Washington in a few days to attend this session of the Army and Medical School.

Dr. Wood graduated from the Northwestern University in 1910 with the degree of Bachelor of Science and from the Northwestern University Medical School in 1914 with the degree of Doctor of Medicine. He served internship in Michael Reese hospital, Chicago, for approximately two years, up to the date of his coming to Louisville.

Dr. and Mrs. B. C. Rees, of Louisville, are visiting Dr. and Mrs. C. H. Rees of Winchester.

Dr. C. C. Stevenson, of Becknerville, accompanied by Mrs. Ambrose Haley, of Fayette, have gone to Chicago. Mrs. Haley will consult a specialist. Dr. Stevenson will spend two weeks there, taking a special course at the Rush Medical College.

James Minnick, of Chicago, was elected president of the Mississippi Valley Conference on Tuberculosis, which adjourned its fourth annual session of three days at Louisville.

Dr. Charles McChord of Lebanon, arrived in Lexington September 14 and will join Mrs. McChord to spend a few days at the home of her parents, Mr. and Mrs. R. M. Squires in the county. Mrs. McChord has been visiting Mr. and Mrs. Squires for several weeks and will return home with Dr. McChord.

Dr. T. H. Davis, 71, formerly a resident of Stanley, but more recently of Lewisport, died Monday night October 2nd, at the home of his son-in-law, Mack Allen, in Boonville, Ind., as a result of dropsy. Dr. Davis was well known in Western Kentucky as a practitioner, having spent more than 50 years of his life in that section. His remains were taken to Owensboro Wednesday and the funeral conducted at Elmwood cemetery.

A large number of Louisville physicians attended the annual meeting of the Mississippi Valley Medical Society, of which Dr. Henry Enos Tuley is secretary.

The Christian County Medical Society met Tuesday, October 2, in Hopkinsville. The meeting was strictly a business meeting, and consisted of reports from various committees, etc., preparatory to entertaining the state society on October 24-27. After the meeting the society adjourned to the Pennyroyal for dinner.

The Christian County Medical Society will entertain the State Society one evening with a high class picture show, followed by a banquet at the Latham.

Dr. C. C. Owens, 53 years old, noted alienist and one of the most prominent physicians in Kentucky, died October 8th, of injuries sustained in an accident at Latonia race course Saturday, October 7th.

In a rush for a car following the last race, Dr. Owens was thrown to the ground. Several persons fell on him. He suffered a fracture of his hip, which was followed by complications.

Dr. Owens was superintendent of the Home for Feeble Minded at Frankfort, Ky., from 1900 to 1905. He then went to Lakeland, where he took charge of the State Asylum. He moved to Covington in 1907, where he since was engaged in the practice of medicine.

He was reared on a farm at Washington, Ky., a few miles south of Maysville. He studied medicine at Jefferson University, Philadelphia, Penn., and later was graduated from Centre College, Danville, Ky.

Dr. Owens was known throughout the State as an insanity expert, and hundreds of times had been called upon by courts of various counties to testify concerning the mental condition of persons thought to be insane.

Dr. W. Ed Grant, Louisville health officer, named Dr. Thomas M. Dorsey to fill the temporary vacancy of city chemist and bacteriologist under the health department. Dr. Dorsey, who has done the Jefferson county laboratory work for several years, will begin his new duties in the city laboratory immediately. Dr. Vernon Robins who has been granted an eight months' leave of absence, departed for Boston to take a health officers' course at Harvard University.

Miss Jessie Yancey, County School Superintendent, has been appointed a member of the Tuberculosis Commission by Governor Stanley to succeed Mrs. Desha Breckenridge, of Lexington, resigned.

Dr. E. B. Driskell of Warsaw, and Miss Nola D. Redd of Millersburg, were united in marriage on September 18 in the parlor of the Phoenix Hotel at Lexington. Rev. J. D. Redd, father of the bride performed the ceremony.

A marriage license was issued to Dr. Ernest M. Ewers, of Louisville, and Miss Ruth A. Schaefer, of Piercetown, Ind. Dr. Ewers is 31 years of age and Miss Schaefer is 21. The couple will sail for China, where they will engage in missionary work. Dr. Ewers has just returned from Porto Rico.

The Clark County Medical Society met with Dr. I. A. Shirley at his office in the McEldowney building. Dr. O. R. Venable had an interesting paper on "Serum Treatment for Pneumonia," which was followed by a round table discussion.

Dr. T. R. Welch, of Nicholasville, declined election as secretary of the State Tuberculosis Commission. He said he could not afford to abandon his practice to take up the movement.

In the campaign against tuberculosis a great many people are advocating goats' milk in place of cows', but the day is still a long time in the future when goats will climb the stairs of our tenements to be milked on each landing in turn as is the established Neapolitan custom.

Dr. Harry C. Weber, long prominent in the medical profession of Louisville and formerly a member of the faculty of the old Kentucky School of Medicine, died of uraemic poisoning at 9:05 o'clock October 6 at his home, 501 West St. Catherine street.

Dr. J. B. Floyd was elected to succeed Dr. Dunning S. Wilson, who resigned as head of the Waverly Hill Tuberculosis Sanatorium and Hospital at a meeting of the Board of Directors. Dr. Floyd was resident physician at the sanatorium from the spring of 1915 when he graduated from the medical department of the University of Louisville, until July 1, 1916, when he temporarily was placed in charge while Dr. Wilson was at Ft. Thomas with the Field Hospital of the Kentucky National Guard.

Dr. B. N. Hale is spending several days at Kirksmansville in the practice of his profession, and Dr. B. F. Atwood, of Pembroke is looking after Dr. Hale's office.

Dr. J. F. Reynolds, the specialist on diseases of

the eye, ear, nose and throat, left recently for New York City, where he will take a post-graduate course under eminent surgeons, specializing on the above organs.

Owing to the prevalence of diphtheria the Board of Health of Pineville issued an order closing moving picture shows, the city school, forbidding church meetings, etc.

Bluegrass society circles were much interested in the announcement that Miss Bettie Barrow, daughter of Dr. David Barrow, of Lexington, and Mr. Pitehegru Woolfolk, of Richmond, Va., were married at the bride's home on October 18th.

Dr. J. W. Brandon, of Big Clifty, has a good location for a physician who desires to secure a pleasant country practice.

Dr. Irl Thomas of Marshall County, has located at Pembroke.

Dr. Ben F. Taylor, a leading physician of Adair county, who was badly hurt in an automobile wreck on August 22, died at 10:40 o'clock a. m., August 23. He was 62 years old. Dr. Taylor was driving with his daughter-in-law and a niece. The former was being instructed in driving by Alvin Lewis, a chauffeur, when, crossing an open bridge over a branch four miles out of town on the Campbellsville pike, the machine became unmanageable. The entire party fell a distance of ten feet. Dr. Taylor was injured about the back, and Lewis' right arm was lacerated. The women escaped injuries.

Dr. Randolph Dade, of Oak Grove, who has been doing a large practice in that part of the county, will move to Hopkinsville and begin his practice the latter part of October. He will take the offices and succeed to the practice of Dr. J. Paul Keith, who left October 15th for Louisville, where he will become a partner of his brother, D. Y. Keith. The Drs Keith will do work as X-ray specialists.

The first clinic in the new dispensary of the Scott County Health and Welfare Association was held in the new offices. Three operations were performed, two for trachoma. The patients remained over night on cots in the office.

Dr. A. L. Addington was in the automobile of W. J. Wade and attempted to leave the machine while it was in motion. His foot slipped and he fell, the automobile passing over both ankles. His right ankle was injured much worse than the left one.

Dr. J. W. White, of Flippin, visited Tompkinsville September 27. The doctor is one of the county's greatest good roads advocates, and has con-

tributed much to this subject through the newspapers. He is a firm believer in developing the county in every way possible and has faith in the ability of our people to make greater progress.

Dr. W. Ed Grant, Health Officer, and Dr. J. W. Fowler, superintendent of the City Hospital, were appointed delegates from Louisville by Mayor Buschmeyer to attend the annual session of the American Association for the Study and Prevention of Infant Mortality in Milwaukee from October 19 to 21.

Dr. Joseph Hoeing Kastle, one of the world's greatest chemists and director of the Kentucky Experiment Station, died of Bright's disease at his home in Lexington, September 24, his illness having been of short duration. In 1912 he succeeded the late M. A. Scovell as director of the experimental station and dean of the College of Agriculture. He recently was relieved of the arduous duties of the latter office because of his general state of health.

Dr. John W. Estes, age 60 years, who has been afflicted with paralysis for several years, died at his home in Cynthiana, September 11.

Dr. and Mrs. B. F. Johnson have returned from a delightful sojourn at Atlantic City. On their way home they stopped in Washington where Mrs. Johnson renewed many acquaintances of the school days she spent in that city.

Under auspices of the Anchorage Civic League Dr. Lillian South, of Bowling Green delivered a lecture on "Infantile Paralysis" at the Anchorage Country Club on September 27th.

The natural growth in population of Louisville during the city's fiscal year ending August 1 was above 400, a reliable estimate of the city's vital statistics reveals. By natural growth is meant the excess of births over deaths. From the same source it was ascertained that the total number of deaths from typhoid fever was twenty-eight, a decrease of one over last year and a decrease of more than 100 for almost any of the years preceding the installation and operation of the filtration plant of the Louisville Water Company.

At a call meeting of the Clark County Medical Society held at the office of Dr. John A. Snowden, President, the following resolutions were adopted.

Whereas, an all wise Father has seen best to call from his earthly labors our co-laborer and brother, Dr. George F. Clark, we can but bow to this Almighty decree, notwithstanding our sorrow and regret as his early taking off. Before his final illness he was one of the most regular attendants upon the meetings of our body, and was ever

ready to do what he could to forward its circle of usefulness. His arguments in favor of what he thought best were always contended for, and were, as a rule, sanctioned by the society. His calm submission to the ravages of his last illness, which was of an unusually painful character, bore the marks of a soldier worthy of example. We will find his place difficult to fill, and while sorrowing with the bereaved ones left behind will say look above to the "Great Physician" who alone can console and comfort the widow and orphan.

JOHN A. SNOWDEN,
H. R. HENRY,
I. A. SHIRLEY,

Committee.

The funeral of Dr. George F. Clark took place at the Christian church, Winchester, August 22, the services conducted by Dr. J. H. MacNeill, Rev. F. D. Wentworth and Rev. W. S. Taylor were tender and impressive. The members of Cunningham Lodge of Schoolsville, the Knights Templar of this city and the Clark County Medical Association preceded the funeral party into the church; at the grave the funeral rites of the Masonic lodge were read.

The funeral was one of the largest ever held in this county. The floral blossoms many and beautiful attested the esteem in which he was held.

December 3 to December 10 inclusive has been set aside as Tuberculosis Week in the United States, according to an announcement to-day of The National Association for the Study and Prevention of Tuberculosis.

During this week an effort will be made to enlist the co-operation of every church, school, anti-tuberculosis and public health organization, lodge, and working man's organization in the United States in an active effort to bring tuberculosis to the attention of the people.

Three special feature days will be held during the week. December 6 will be National Medical Examination day. On that day an effort will be made to get everybody, men, women and children whether sick or well, to be examined in order to find out if they have any defects or impairments of their bodies that need attention. If examination is not possible on December 6, appointments will be made then for later examination.

December 8 will be Children's Health Crusade Day. It is hoped at that time to launch a national organization of Modern Health Crusades, an association of the children of the United States in the public schools, for fighting against tuberculosis and for better health.

December 3 to 10 will be observed according to the convenience of the churches, as Tuberculosis Day. A special sermon and a series of talking points for ministers and others have been prepared and will be ready for distribution in the near future.

Last year 150,000 organizations and institutions took part in the Tuberculosis Week celebration. It is expected that this year this number will be greatly increased.

Free expert advice for consumptives and other interested in tuberculosis is given in a pamphlet issued by the National Association for the Study and Prevention of Tuberculosis, entitled "What You Should Know About Tuberculosis."

The pamphlet was prepared by a committee of experts of international prominence consisting of Dr. Charles L. Minor of Asheville, N. C.; Dr. David R. Lyman of Wallingford, Conn.; Dr. H. R. M. Landis of Philadelphia; Dr. John H. Lowman of Cleveland, and William H. Baldwin of Washington. It contains the latest and most authoritative information about tuberculosis.

It deals with the nature of the disease; how infection may take place; how the disease is cured; how the family may be protected; what the patient may do after discharge, and how the disease may be prevented in the community.

A copy of the pamphlet will be sent free to anyone applying for it at the office of The National Association for the Study and Prevention of Tuberculosis, 105 East 22d Street, New York, or at the office of his own state or local anti-tuberculosis association, or board of health.

Dr. J. C. Carriek has returned home from a visit to New York and Saratoga. He said the health authorities of New York are much encouraged over the outlook for the suppression of the further spread of infantile paralysis, and look for a rapid diminution of the number of new cases.

Dr. H. C. Kehoe will retire as superintendent of the Institute for the Feeble-Minded, and R. J. McMichael, of Lexington, as steward. It is reported that Dr. S. L. Helm, first assistant at the Eastern State Hospital may succeed Dr. Kehoe.

Dr. Thomas Farris Hale, of Philadelphia, is visiting his parents, Dr. P. T. Hale and Mrs. Hale at their home in Louisville.

Gov. Stanley has received the resignations of Mrs. Desha Breckinridge, of Lexington, and Miss Tevis Camden, of Woodford County, as members of the State Tuberculosis Commission. The resignation becomes effective immediately.

Dr. and Mrs. Leslie Logan have returned from their honeymoon and are at home at Barbourville.

Kentucky's death rate in 1915 was 12.3 per each 1,000 persons, while the rate for the entire country was 13.5. Louisville's death rate in 1915 was 15 for each 1,000 persons. This rate was fixed on a basis of 3,550 deaths in 1915 in an estimated population of 237,012.

These statistics were announced by the Bureau of Vital Statistics of the Department of Commerce. They are preliminary and subject to correction later. The fact that the Louisville death rate is fixed upon an estimated population, reached through an arbitrary mathematical calculation and not city directory estimate, gives the city a rate which is believed to be higher than the actual rate. The population estimate used by the Department of Commerce credits Louisville with a gain of only 13,000 persons in five years since the last official census was taken. The Louisville city directory gives the city an estimated population of 263,256; on basis of this estimate the city's death rate last year would have been 13.5 for each 1,000 persons.

Kentucky's death rate among its white population is one of the lowest in the United States, being only 11.1 for each 1,000 persons in an estimated white population of 2,115,315. The number of deaths in the State is placed at 28,986, of which 23,481 are among white persons and 5,505 in a negro population of 249,870. The death rate for the negro population was 22 in each 1,000.

Louisville showed a decrease of 21.1 per cent. in the death rate of 1915 as compared with the average rate for the five years of 1901-1905. Death rates for Louisville's rival cities follow:

Indianapolis, 14.7 in estimated population of 265,578, a decrease in rate of only 4.5 per cent. from the average for 1901-1905; Cincinnati, 15.6 in estimated population of 406,706, a decrease of 18.3 from average; Nashville, 17.2, in estimated population of 115,978, decrease of 20 per cent. over average; Memphis, 19.8.

BOOK REVIEWS

Diseases of the Eye.—By George E. deSchweinitz, M. D., LL. D., Professor of Ophthalmology in the University of Pennsylvania. Eighth Edition, Thoroughly revised and enlarged. Octavo of 754 pages, 386 text illustrations, and seven lithographic plates. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

A book familiar to all and the standard for a quarter of a century. Brought up to date by the rewriting of much of the text and the addition of new chapters and illustrations.

1915 Collected Papers of the Mayo Clinic, Rochester, Minn. Octavo of 983 pages, 286 illustrations. Philadelphia and London. W. B. Saunders Company, 1916. Cloth \$6.00 net; Half Morocco \$7.50 net.

This number constitutes one of the most valuable of the series, of which it is the seventh.

The large amount of material passing through the Mayo clinic and the painstaking care with which each case is studied and reported makes

possible and available some of our choicest medical literature.

The section on Ductless Glands contains an article on Goiter and Life Expectancy by Dr. C. H. Mayo and other interesting contributions by the Staff, notably a report of the case histories of 121 operations for Goiter for the five years following operations.

Other articles are grouped in sections as follows; The Alimentary Canal; Urogenital Organs; Head, Trunk and Extremities; Technic; General Papers.

Physics and Chemistry For Nurses—by Amy Elizabeth Pope. G. W. Putnam's Sons, New York. Price \$1.75.

A valuable little book for the house keeper as well as the nurse. In the absence of a course on these subjects in a properly equipped school a housewife can greatly increase her knowledge of domestic problems by a close study of this book. Especially valuable should be those parts devoted to food, water, cleansing and cooking.

Surgical and Gynecological Nursing—By Edw. M. Parker, M. D., F. A. C. S. and Scott D. Breckenridge, M. D., F. A. C. S. 425 pages, 134 illustrations. J. B. Lippincott Company, Philadelphia. Price \$2.50.

In the limited yet important field defined by its title this little volume might well be called a nurses hand book and should prove an agreeable and useful companion during the long hours of duty. The young nurse about to enter operating room service will find many of her perplexities relieved if she has access to such a store of concise information.

DO YOU KNOW THAT.

It is dangerous to put anything into the mouth except food and drink?

Sanitary instruction is even more important than sanitary legislation?

The U. S. Public Health Service issues free bulletins on tuberculosis?

The continuous liberal use of alcohol beverages lowers efficiency and menaces longevity?

Moderate exercise in the open air prolongs life?

"Mouth breathing" makes children stupid?

Smallpox is wholly preventable?

Fish cannot live in foul water nor man in foul air?

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W. H. LONG*Louisville*NEXT MEETING STATE ASSOCIATION.
ASHLAND, 1917

COUNTY SOCIETY REPORTS

Barren—The Barren County Medical Society met in Dr. Potts' office, Glasgow, September 20, 1916.

Members present, Drs. Botts, Biggers, Miller, Smock, Howard, Taylor, White, Jones, E. D. Turner, Depp, Aeton, Siddens and York.

President Smock called the society to order at 10:30 a. m.

J. B. White and W. F. Britt presented some interesting clinical cases which were discussed by all the number present.

Adjourned to meet at 1 o'clock p. m.

Afternoon Session.

An hour was spent reporting and discussing cases met with in actual practice by several members. The discussions were lively, and highly enjoyed by all.

E. D. Turner read a valuable paper on "Hemiplegia." The paper was listened to with marked interest, and was discussed at some length by Miller, Botts, Howard and others.

Motion carried that Dr. Turner's paper be sent to the Journal for publication.

There being no further business, the society adjourned to meet October 18th, 1916, at 10 a. m.

J. MORGAN TAYLOR, Secretary.

Ballard—The Ballard County Medical Society has its regular meetings the second Tuesday in each month, our last meeting, September 11, 1916, at Lovelaceville, was attended by eleven members of the society. We only have fifteen active members in the county. The other few have retired from practice and do not take any interest in the society. We had a splendid program and much interest manifested by every member which is always the case at the meetings.

J. S. Johnson of Barlow, moved to Paducah to practice his profession and the society has appointed H. V. Usher as secretary to fill out the unexpired term.

H. V. USHER, Secretary.

Carlisle—The Carlisle County Medical Society met in Cunningham, in the home of Dr. and Mrs. D. S. Robertson, at 10 o'clock a. m., on September 5th, with the following doctors present: Burnett Benson of the German Hospital, New York City; Hazel P. Mosby of the Mayo Clinic (a member of this society); Dr. Robertson of Cunningham; Peas, Kirbyton; Hoeker, Dunn, and Jackson, of Arlington; Crouch, Payne, Marshall, and Wm. L. Mosby, of Bardwell.

The minutes of the last meeting were read and approved. Committee on arrangements reported and the report accepted and committee was discharged.

W. Z. Jackson read a paper on the "Etiology and Treatment of Poliomyelitis.

J. T. Marshall read a paper on "Symptoms and Treatment of Poliomyelitis.

These papers were well prepared and fully discussed by all the doctors present with reference to the present prevailing epidemic eliciting considerable interest. Dr. Benson relating cases seen in New York and Dr. Hazel P. Mosby cases and sequella as seen in Orthopedic Department of Mayo Clinic.

Dinner was now served by Mrs. Robertson and some good lady friends, which was sumptuous, well prepared and much enjoyed by all present.

R. T. Hocker, being afflicted with glaucoma did not write his paper as is his custom, but talked to the subject of "Etiology and Pathology of Insolation" bringing out many interesting points.

J. T. Dunn read a paper on the "Treatment of 'Insolation,'" He uses ice or hydrotherapy for temperature above 104 degrees F., digitalis etc., heart exhaustion, he prefers hot water, blankets, strychnia and stimulants, etc.

These papers were discussed by all members present which developed much interest.

W. Z. Jackson was elected as delegate to the coming State Medical Association with Dr. Dunn as alternate.

The society extended a vote of thanks to Dr. and Mrs. Robertson (especially the latter) for the splendid hospitality and elaborate dinner served by them to the delight of all present.

The society adjourned to meet in Bardwell the first Tuesday in December.

WM. R. MOSBY, Secretary.

Muldraugh Hill—The Muldraugh Hill Medical Society was called to order by Dr. D. W. Gaddie at 11 a. m., in the Court House, with twenty-four members present. None of the officers were present therefore nominations were in order for chairman. Dr. Gaddie was nominated by Dr. Lutz. Dr. R. T. Layman put the question which resulted in the election of Dr. Gaddie. In the absence of the secretary Dr. Horine was elected to act as secretary. The reading of the minutes were dispensed with.

J. R. Wathen presented a case of intestinal obstruction due to Meckel's diverticulum. The patient, a man aged 26, had been operated one year previously for an acute appendicitis. This operation was done in California by a man who had made an incision about two inches in length. Probably due to this short incision the surgeon overlooked the Meckel's diverticulum. He emphasized the necessity of making an incision of sufficient length to thoroughly explore the abdominal cavity.

Irvin Abell, in opening the discussion, agreed and emphasized that the incision should be of sufficient length to thoroughly explore the cavity.

A. D. Wilmoth called attention to the high mortality of cases of Meckel's diverticulum as illustrated by reports from Dr. Halsted.

R. T. Layman presented a case for diagnosis. This patient had been presented about a year ago. The opinion at that time was that the patient had tertiary syphilis. He received iodides with some improvement, later he developed pleurisy, with effusion. A pint of fluid was withdrawn and examined by the State Laboratory. The report from the laboratory showed that the material was negative as to tubercle bacilli. Nothing else was discussed in the laboratory report.

A committee composed of doctors Strickler, Pope and Willmoth was appointed to examine the patient and report as to his present condition. The report was presented by Dr. Pope who said that, the unanimous opinion was that this man had syphilis. This confirmed the former report. No discussion of this case.

M. L. Ravitch and **S. A. Sternberg** contributed a paper entitled "The Relationship of Feeding in Infantile Eczema." Following the reading of the paper, the Society adjourned for dinner.

After dinner the members motored out to the Lincoln Farm where the meeting was continued in front of the Lincoln Memorial Building. Owing to the forced absence of Dr. Gaddie, the meeting was presided over by Dr. Willmoth, who called for the first paper at 1:45 p. m.

J. S. Lutz read a paper entitled "Duodenal Ulcer from the Practitioner's Standpoint."

Curran Pope in discussing the paper emphasized the great value of the X-ray.

H. J. McKenna said that careful history of such cases was most important, and would help in making a diagnosis in 90 per cent. of the cases.

Irvin Abell emphasized the importance of careful history taking.

J. S. Lutz in closing said that he believed that it was quite difficult before perforation to absolutely diagnose a case of duodenal ulcer.

Curran Pope delivered an address on "Lincoln" which was a masterpiece, and which was enjoyed not only by the members of the society, but by a number of visitors to the Farm.

J. R. Wathen read a paper on "A Satisfactory Technique in Prostatectomy." This was illustrated by a number of original drawings.

W. A. McKenna opened the discussion and complimented the essayist.

Irvin Abell said that he had used a technique somewhat similar to that of Dr. Wathen, but that he saw in the technique as employed by Dr. Wathen many points of superior advantage, and that he intended following Dr. Wathen's technique in the future.

J. R. Wathen, in closing, said that his mortality had been reduced considerably by the employment of the technique as described in his paper.

I. J. Greenwell read a paper on "Toxicology."

E. F. Horine read a paper on "Acidosis, Its Determination, Treatment, and Significance." Following the reading of the paper the apparatus of Marriott for the determination of carbon di-

oxide tension in the alveolar air was demonstrated. Dr. Pope in discussing the paper emphasized the great value of studies in acidosis.

Adjournment at 4 p. m.

E. F. HORINE, Secretary.

McLean—The McLean County Medical Society met at Calhoun, October 12 and elected officers for the ensuing year. The following officers were elected: R. S. Ford, president; E. F. Mitchell, vice president, and W. W. Spicer, was re-elected secretary. W. L. Haynes was elected as Delegate to the State Meeting at Hopkinsville. A good many of the doctors in this county are not members of the county medical society. The next meeting will be in November.

W. W. SPICER, Secretary.

Owen—The Owen County Medical Society met at the office of Dr. J. W. Botts. George Purdy, president, presided and the following members answered to roll call: Drs. George Purdy, J. C. B. Foster, W. E. Foster, J. W. Botts, K. S. McBee, D. E. Lusby and J. H. Chrisman.

As we had no regular program the time was employed discussing clinical cases.

J. W. Botts reported a case of fracture below ankle joint and dislocation of both bones of forearm with fracture of radius in a man sixty-seven years old. This case also suffering with retention of urine.

K. S. McBee reported a case of injury in automobile accident followed with paralysis of right side.

Following is the program for the October meeting:

J. C. B. Foster will read a paper on "Treatment of Compound Fractures."

J. W. Botts will read a paper on "Diagnosis of Perforation of Stomach and Intestines."

Meeting adjourned to meet the first Thursday in October.

J. H. CHRISMAN, Secretary.

Wayne—The Wayne County Medical Society met September 19th.

A. S. Cash, C. C. Rankin, O. M. Carter, J. S. Hart, J. W. Bryant, W. L. Baker, A. W. Cain, of Somerset; A. T. McCormack, of Bowling Green; J. F. Young, were present.

The society, by common consent, left all the work of the society undone for the present evening, and gave to our distinguished visitors the right of way.

The meeting was entirely informal and all the more delightful, because it gave a greater opportunity for a free and open conversation to each one present.

A. T. McCormack led in a talk on the Kentucky Sanitary Privy, with our very popular banker, Mr. W. L. Baker, drawing him on by asking him a lot of very appropriate questions. Mr. Baker and the writer are pioneers in building the Ken-

tucky Privy in this county. A privy for the graded schools was discussed. Dr. McCormack was so full of this subject and so deeply interested in it; that it took some tact, to draw him away, without appearing to be rude.

Medical Organizations, the Doctor, the Journal, Typhoid Vaccine, Diphtheria Antitoxin, and other biological products were discussed briefly by the members present.

We were pleased to have Dr. Cain with us and he accepted the opportunity to give one of his very quiet and encouraging talks about the doctor and organization. Glad to have you come any time, doctor.

Hot tea was served about 10 o'clock with the hope that it would add some joy and comfort to all present.

A. T. McCormack was in Somerset on the 19th to attend the "Niger's" trial and found time to come with Dr. Cain to Monticello to visit our society. They left for Somerset at 11:15 p. m.

J. F. YOUNG, Secretary.

The Grant Magnet As Aid in Extracting Scraps of Metal from the Brain.—Rocher shows by illustration show the magnet causes waves in the brain tissue which help to mobilize the bullet or scrap of shell. The attraction should always be applied so as to draw the bullet out by the path it entered. He has made a special study of the subject on cadavers, and points out the dangers to be avoided. When the foreign body is in quite deep, he interposes a narrow steel funnel, 5 cm. long, fitting over the tip of the magnet. It is important to draw the bullet out by its tip, and under control with the Roentgen rays it is possible to guide and draw the tip around to the best position for its extraction from the tissues.

Blastomycotic Meningitis.—Goto's patient was a member of the legislature, 61 years old. A three page clinical chart of his case is given, with three colored plates showing the necropsy findings in the brain and meninges and in the lungs of mice inoculated with the cerebrospinal fluid. The main symptoms had been headache, tinnitus, deafness, persisting "cold in the head," anosmia and diplopia, with pains in the right leg and reduced sensibility in the right trigeminal region. During the seven month's course there was no fever until toward the last, when symptoms of meningitis became pronounced. From the first were noticed right abducent paralysis and atrophy of the right half of the tongue. The fluid at lumbar puncture the fifth month was under high pressure and contained blastomycetes and 3 or 5:1,000 albumin. No point of entry for the blastomycetes could be discovered, but innumerable blastomycotic nodules were found on the pia, containing blastomycetes and giant cells in profusion.

THE FORUM

Whereas, in the providence of God, Dr. Cecil Hudgins, of Olive Hill, Kentucky, on the 28th day of September, 1916, was called to pass the way of all the earth:

Resolved, By the Medical Association of Carter County, Kentucky, in regular session at the office of Dr. G. B. O'Roark, in Grayson, Kentucky, October 10th, 1916, That in the death of Dr. Hudgins, this association has lost an esteemed member—a man of unsullied honor, of highest professional skill, and whose observation of the code of ethics, governing an honorable physician, was complete.

That, the County has lost one of its best citizens, and the profession one of its most worthy members.

Resolved, That the sympathy of this association is most sincerely extended to his bereaved wife, and family, and that a copy of these resolutions be furnished them; that they be published in the county papers and spread on the records of this association.

J. W. STOVALL,
W. A. HORTON,
T. T. BAYS,
H. M. FULTS,
G. B. O'ROARK,
Committee.

TO THE EDITOR:

On page 451 of September number of the JOURNAL I notice your comments on "Criminal Abortion." First, that it is against public policy to defend any one *accused* of a crime. Why? Does accusing a man make him guilty? This doctor must have had standing with the profession, else he would not have been a member of the Association. Could not a reputable doctor be wrongfully accused?

Your second reason is splendid. But because he has been accused does that *make him a criminal abortionist*?

Doctor, from the face of your article I fear that you are over-anxious to jump at conclusions. My motto would be, were I a member of the Medico-Legal Committee, to stand by *any* member of this Association accused of any crime, coming in the scope of the practice of medicine until *proven guilty* beyond a shadow of a doubt. I will cite you a case in my own life's history:

Some twelve or fourteen years ago a young lady came into my office, and related to me, her case of suppressed menstruation, she was a girl of about eighteen or nineteen years of age, one of whom I had never suspicioned of partaking of the "forbidden fruit" yet she was so insistent that she should be given something to start the menstrual flow, that I became suspicious and told her I had nothing in

the office but would write a prescription that would eventually give her the desired results. I wrote a simple prescription, I do not recall just now what, but one if brought into court would vindicate me of any criminality.

Either that night or the next I was called in haste, she had fallen in a dead faint, and one of the family told me she had been wasting, and had been taking gun powder. When I found her she was lying on a bed, hastily thrown there with her clothes on, and reeking with blood, almost pulseless. I gave a hypodermic of nitroglycerine and strychnina, loosened her clothing, removed soiled garments, and relieved her of about two and one-half or three months' foetus. I could have been accused and I know I was innocent. I should be glad to have your further views either personally or editorially.

Fraternally yours,
G. B. O'ROARK.

How the Government is Meeting the Malaria Problem.—Four per cent. of the inhabitants of certain sections of the South have malaria. This estimate, based on the reporting of 204,881 cases during 1914, has led the United States Public Health Service to give increased attention to the malaria problem, according to the annual report of the Surgeon General. Of 13,526 blood specimens examined by Government officers during the year, 1,797 showed malarial infection. The infection rate among white persons was above eight per cent., and among colored persons twenty per cent. In two counties in the Yazoo Valley, 40 out of every 100 inhabitants presented evidence of the disease.

Striking as the above figures are, they are no more remarkable than those relating to the reduction in the incidence of the disease following surveys of the Public Health Service at thirty-four places in nearly every State of the South. In some instances from an incidence of fifteen per cent., in 1914, a reduction has been accomplished no less than four or five per cent., in 1915.

One of the important scientific discoveries made during the year was in regard to the continuance of the disease from season to season. Over 2,000 Anopheline mosquitoes in malarious districts were dissected, during the early spring months, without finding a single infected insect, and not until May 15, 1915, was the first parasite in the body of a mosquito discovered. The Public Health Service, therefore, concludes that mosquitoes in the latitude of the Southern States ordinarily do not carry the infection through the winter. This discovery indicates that protection from malaria may be secured by treating human carriers with quinine previous to the middle of May, thus preventing any infection from chronic sufferers reaching mosquitoes and being transmitted by them to other persons.

INDEX NUMBER

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No. 12

EDITORIAL

PROCEEDINGS OF SCIENTIFIC SESSION AND HOUSE OF DELEGATES.

On other pages of this issue, will be found the proceedings of both the scientific session and the House of Delegates, at the Hopkinsville meeting. The many matters of importance were considered in the House of Delegates. Our efficient stenographer reproduces every word that was uttered, so that the men who stay at home can know what was said and done by their representative. It was a most valuable meeting.

Our annual meetings are of value, just in proportion as the members take an interest in them.

COUNTY OFFICERS.

During December, the annual meeting of the County Societies will be held and new officers will be elected. It is of especial importance that your present county secretary be re-elected in every county where he is doing good work, and that you try somebody else in every county where he is not. It is not always the secretary's fault, entirely that the county society is not doing well, but it is unfortunate if he cannot secure the cooperation of his fellow members to a sufficient degree to make a live society. It is trite to say that the Doctors cannot be interested; it is also untrue. Many of our counties which have bad roads and few doctors are holding regular meetings which are thoroughly well attended, and, if a live program is organized and delivered at each meeting, there is no difficulty in getting the members to come. Many of the county societies collect the annual dues for the next year at the December meeting. This is an excellent plan, and saves the secretary a lot of trouble and all the members are assured against delinquency.

The coming issues of the JOURNAL will be of

great interest and value, as they will contain all of the proceedings of the Hopkinsville meeting, as well as current papers from the county societies. If every member will take a little more interest in his county society during 1917, than ever before, we can advance the usefulness and value of the Profession to itself and to the people of Kentucky, by just that much.

INDEX.

In this issue of the JOURNAL, will be found the elaborate and complete Index for the 1916 Volume. It will be noted that the contents of this volume are indexed by subjects and cross indexed by Authors, so that each of our members can see just how much he has contributed to the value of the JOURNAL. If you have not done your share this year, will you not help some during 1917?

DETAIL MEN.

Out of every ten detail men who come into your office, eight come from firms which are using the Medical Profession—you, included—to advertise wares which are useless or worse. The conscientious physician wants to know how he can choose between the good and bad detail men. Those who have been in constant attendance at the State Medical Meeting and have heard the discussion of medical advertising in the JOURNAL for the past ten years, have no difficulty in the solution of this problem. Ask Mr. Detail Man if his firm advertises in your State Journal! Ninety-nine cases out of every hundred, if they do not, it is because they cannot get in. Remember, that out of every three applicants for advertising space, two are refused. Our advertising columns are published primarily for the benefit of our readers, and, it is not only important that you take advantage of things we advertise for your benefit, but it is almost of equal importance that you beware of things we are not advertising.

READ ALL THE JOURNAL.

We had the opportunity of dropping in the other day on two of our colleagues in another town, and found them very much interested in the discussion of a paper they had read in the *Medical Journal* published in a distant state. After listening for awhile, I asked them if they had looked over the current issue of the KENTUCKY MEDICAL JOURNAL. They said they had failed to read one of the orations, because they said orations were generally more words than thoughts. We then read this particular oration together. It solved their problem for them. There is some article in almost every Journal that will solve some problem for you, or which will enable you to solve one for some other fellow. If you find anything in the Journal, you disagree with, write us about it and we will print your letter in the forum. Especially if any articles contain any case reports, send them to us.

Many of our readers will constantly find their problems solved in our advertising pages. It is well to remember that the JOURNAL guarantees our advertisers for their advertised products. In other words, we take all the risk of any financial loss from dealing with any of our advertisers. There is no other medical or lay publication which does this. In return for this, our advertisers pay us more in proportion to our subscription list than is paid most medical journals. This means that they know it pays to be in a select list like ours. In order that it may continue to pay better, it is essential that more of our readers read the advertising pages. If you are going to buy anything, give our advertisers an equal chance, and if they don't offer you better goods at better prices, buy elsewhere, but read through the pages, to-day, and see if you cannot write a letter of inquiry to someone of them about something they advertise.

CARREL'S SOLUTION.

We have had a number of queries as to the formula of the antiseptic solution which has been recommended by Dr. Carrel, as a result of his experience in the European War. It is made, as follows: Dissolve in a large bottle 140 drams dry carbonated soda with ten litres of sterile water; add to this 200 drams of fresh chloride of lime and shake well; every 30 minutes, siphon off the clear fluid into another bottle through a cotton slug, and add 40 drams boric acid to the clear fluid.

DR. CHARLES H. TODD.

Notwithstanding his advanced age, the death of this noble man, who had earned and received signal and continuous honors from his home people and his chosen profession through a long and happy life, within less than three weeks after the Hopkinsville meeting, where young and old alike gave him such a cordial reception, as could not but make his heart glad, death came as a shock to all who knew and loved him.

The ancestry of Dr. Todd was an inspiration and a peculiar glory to him and his life had in it many of the elements of romance. His paternal grandfather, Thomas Todd, of Virginia, was an honored friend of Washington and Jefferson, and an associate justice of the Supreme Court of the United States. His father, Colonel Charles S. Todd, was chief of staff officer to General William Henry Harrison during the war of 1812, was appointed United States Minister to Russia by President Harrison in 1840. His mother was the daughter of Isaac Shelby, first governor of Kentucky, and by this side of his family he was a nephew of Dr. Ephriam McDowell, the father of ovariectomy.

Dr. Todd was born in Shelby county, Kentucky, November 6, 1838, and received much of his education at Frankfort under that distinguished tutor, Professor B. B. Sayre. He went to New Orleans for his medical education in 1858; was a resident student of the Charity Hospital for more than a year, and upon his graduation in 1861 was chosen by the faculty of the University of Louisiana as assistant physician to the insane asylum at Bayou Sara, but resigned this position upon the outbreak of the Civil War, a few months later, and went to Virginia as assistant surgeon in the Sixth Louisiana Regiment. He was made full regimental surgeon under Stonewall Jackson in 1862 and was in active field service until the final surrender of Lee at Appomattox.

The close of the war left him in an impoverished country, with a superabundance of friends as poor as himself, and, undaunted, he selected Owensboro as a location and made the trip of about 600 miles on horseback, covering a period of twenty-two days, to a community which gave him a reception which he never forgot, and where he soon built up a large and lucrative practice. As soon as a living for her was assured, he married Miss Rosa Burwell, of Virginia, a cultured, gifted woman, who was the inspiration and guide of his life until her death only a few years ago. His home people showered honors and offices upon him during a long life, and the medical profession of his county and State seemed proud to do likewise. He was ap-

pointed a member of his county board of health when the law creating it was passed in 1878, and served continuously in this capacity, and as county health officer and county medical referee, until his death. He was elected president of the State Medical Society at Frankfort in 1878 and had the honor and pleasure of presiding at the great meeting at Danville the following year, when the monument to his uncle, Dr. Ephriam McDowell, was dedicated, with Dr. Samuel D. Gross as the orator.

Quiet and gentle as a woman and observing the golden rule in his dealings with his professional brethren and others in his daily life, his memory is a precious memory which will linger with us always, if we believe:

"There is no death, the Stars go down
To rise upon some fairer Shore,
And bright in heaven's jeweled crown,
They shine forever more.

And ever near us though unseen,
The dear immortal spirits tread
For all the Universe is life—
There are no dead."

AN INNOVATION.

Under the above title, Dr. Warnshuis, in the *Journal of the Michigan State Medical Society*, tells of one of the best things we have yet seen done by a county society for itself. The Jackson County (Michigan) Medical Society secured the presence of Dr. Cabot of Boston for a week. Every morning during that week Dr. Cabot conducted a Clinic at one of the local hospitals. Each evening there was held a meeting at which Dr. Cabot delivered a lecture. Many cases were presented, their etiological, pathological, diagnostic features were discussed and their treatment outlined. As a result of this week of study, under a great master, there are going to be better doctors in Jackson county. This is one of the best suggestions we have yet seen for making better and more effective physicians. We trust some Kentucky county will do likewise.

BREEDING FLIES.

An interesting Bulletin from the Bureau of Entomology, of the U. S. Department of Agriculture, directs attention to the demonstrations that the breeding of flies in manure can be prevented by treating the substance with calcium cyanide and acid phosphate, which, at the same time, increased the fertilizing value of manure.

Copies of the report containing this practical suggestion and many others of value can be secured by writing to your Congressman or Senator at Washington.

SCIENTIFIC EDITORIALS.

TREATMENT OF DERMATOSES DUE TO NEPHRITIS.

Both dermatologists and general practitioners often meet with dermatoses that are caused by constitutional conditions. In renal disorders, especially the nephrites, persistent dermatoses are met with quite often. Sometimes the dermatoses are comparatively easy to manage, as is usually the case with those due to oxaluria, but the skin condition is very apt to be stubborn where acute or chronic nephritis is the cause especially in the latter type. Treatment of the skin condition alone may result in temporary improvement, but recurrences are almost sure to occur very soon. In order to secure permanent disappearance of the dermatoses it is necessary to treat the underlying condition.

The dermatoses that are most often seen accompanying nephritis are acute eczema, scarlatiniform erythemas, and pruritus. The external treatment consists in the application of very mild lotions, such as calamine or an alcoholic boric acid solution. The success of the treatment, however, depends mainly on the efficacy of the treatment of the nephritis.

In acute nephritis the patient should be kept in bed until entirely well or until the acute condition has passed into the chronic type. It is not always so easy to determine when either of these points have been reached, but is better to keep the patient in bed too long than to allow them to get up and go about too soon. Certainly the patient should be kept in bed until he shows great improvement, until the total quantity of urine, the urea elimination and specific gravity are normal, until the albumen has decreased to a minimum and the number of casts and renal cells are small. When the patient is first allowed to get up there may be a transient decrease in albumen and casts; this should be carefully watched and if it does not soon diminish again the patient should be returned to bed. In those cases in which the acute nephritis becomes a chronic one it may be impossible to get the urine free from a certain amount of albumen and casts; these are not to be viewed with such alarm, but the persistence of erythrocytes, renal cells, or a large number of leucocytes is a sign of an active process still going on and the rest-treatment should be kept up until urinary examinations show that it has disappeared for some time. In mild and favorable types of acute nephritis the albumen may disappear entirely, indicating that very little permanent damage has been done. Even if a small amount of albumen persists, but the urea-excretion is good and there are no renal or blood-cells in the

urine, we may assure the patient that only a limited amount of permanent damage has been done. Such persons may resume their duties and should be good life insurance risks. The persistence of even the slightest number of renal cells or erythrocytes is an indication for care on the part of the patient; the diet should be kept low in proteids especially meats containing much purin, and all irritation to the kidney, whether from excessive fatigue, alcohol, highly seasoned foods, or drugs, should be carefully avoided.

As to the diet, in general, at the onset of an attack of acute nephritis, sugar sweet fruits and fruit-juices and gruels made of cereals, are acceptable; meats, spices, alcohol and coffee and tea should be omitted; if there is any oedema the quantity of fluids ingested should be kept very low, especially in the absence of toxemia. Formerly it was generally taught, on the authority of such men as Von Noorden, that the amount of chlorides ingested was to be reduced to as low a figure as possible, but our experience has been that in many cases the administration of chlorides, together with alkalis, is beneficial. We also believe that theobromin is indicated in many of these cases.

In the cases of chronic nephritis complete rest is necessary only when there is oedema or hematuria or cardiac embarrassment. However, the patient should be warned against fatigue, since it increased the strain on both heart and kidney. Meat should be allowed in moderation only, owing to the extractives it contains. Many physicians warn chronic nephritics against eating eggs, evidently on the theory that if the kidneys are excreting albumen a decrease in the albumen in the food will lessen the percentage of albumen in the blood and thus decrease albumen leakage through the kidneys. This theory has no scientific basis. The albumen which appears in the urine is blood albumen, and the more of this albumen that is lost the more the blood needs protein food from which to replenish its stock. There is no data to prove that an increased percentage of albumen in the blood increases the amount in the urine; the case is in no way analogous to the escape of sugar through the kidney, which increases with the concentration of sugar in the blood, and which is due to too high a sugar-concentration in the blood and not to increased kidney permeability. Albuminuria is due to a diseased condition of the kidney itself, wherein the kidney cells are unable to prevent the serumalbumen in the blood from passing through them into the renal tubules. Nor is there any evidence that the passage of albumen through the renal epithelium causes any damage to the cells like the damage to renal cells from the irritation of concentrated sugar solutions. The valid reasons for a low-

proteid diet in chronic nephritis are: first, that proteids are often accompanied by extractives which are irritating to the renal epithelium, and second, that a high protein intake means a large amount of urea to be excreted. Therefore, while there is justification for a low proteid diet in the presence of a diminished ability to excrete urea, in the absence of this there is no justification for the restriction of such non-irritating foods as egg-albumen or milk albumen. In cases which are not too grave a small amount of meat may be allowed; as far as is known there is no difference between the meats, whether dark, white or red, as far as may be indicated by the color. There is a difference between the meat from one animal and that from another animal, even between the adult and young of the same species: thus, it has been established that veal has a higher percentage of the purins than beef and is therefore more irritating to the kidney. Liquids should be restricted to a certain degree: alcohol forbidden; exercise should not be too violent; whatever tends to raise blood-pressure, such as excitement, worry, anger, and strong emotions of any kind, should be avoided as much as possible. Hot climates are usually better for such patients than cold climates, but higher altitudes than one mile, sometimes even less, may be quite unsuited to the nephritic.

M. L. RAVITCH and S. A. STEINBURG.

Disinfection of War Wounds.—Barbarin has served during the war at a base hospital from 20 to 40 kilometers back from the front, and he has had opportunity to note the effect of the disinfectants applied at the first dressing station, as well as in his own service. He insists on draining from the lowest point; this nullifies the action of the Carrel continuous irrigation technic, and he seeks to accomplish the same purpose in another way. He lays a pile of scraps of agar on a square of gauze, making a very loose bag of it by drawing up the edges and tying them together. This bag of agar is then fitted into the wound, the corners of the gauze projecting above and spreading out over the surface. A drain tube projects below at the lowest point of the wound. The agar is then profusely watered with Dakin's solution or other disinfectant. It swells and thus spreads the wound and opens up the recesses while bringing and holding the disinfectant against the tissues. The disinfectant is poured in anew every two or three hours or can be supplied by the drip method with a Carrel tube, one end set deep in the agar, the other projecting above the wound. He says in conclusion that the early disinfection possible with this simple means, which does not interfere with the transportation of the wounded, realizes results beyond the fondest dreams, the wounds healing infinitely earlier and more completely.

OFFICIAL ANNOUNCEMENTS

KENTUCKY STATE MEDICAL ASSOCIATION.—OFFICIAL MINUTES OF THE SIXTY-SIXTH ANNUAL MEETING HELD AT HOPKINSVILLE, OCTOBER 25, 26 and 27, 1916.

OCTOBER 25.—FIRST GENERAL MEETING.

The Association met at the First Christian Church, and was called to order at 9:30 A. M., by the President, J. W. Kincaid, Catlettsburg, who said: It gives me very great pleasure to meet you all again and to see you here. I am sorry, owing to the inclemency of the weather and the difficulty of making train connections, that there are not more present at the opening session. Doubtless before the meeting is closed, we will find an attendance here that will gratify our expectations.

Reverend J. N. Jessup was introduced and delivered the following invocation.

INVOCATION.

We come Father, this morning, with the consciousness that these men are interested in all things that interest us for good; wherefore we more readily come to thee. First of all, we desire to lay here upon this altar our thanks for Thy manifold mercies, Thy loving kindness, and Thy tender care. We thank Thee, Oh God, for the light and the love and the beauty and glory of this day. It is a great and good day in the history of the world—the very best day the world has ever seen. It is the best because it is the last, for each succeeding day in the world's history shall be better than the preceding day, and we shall carry into it the accumulated righteousness, goodness and helpfulness, and fraternity and love of all preceding days. And so tomorrow will be better than to-day because we shall carry into it more of helpful service.

We thank Thee, Oh Father, for all agencies that will help to make the world better and brighter and life more worth while. In fact, never were there more agencies working for the good of humanity, and never was the sum total offered so great as it is to-day. Most of these humanitarian institutions are already pushing themselves onward and upward as the ministry of healing.

We thank Thee, our Father, for this department of scientific research, and we pray that Thy blessings may rest upon this department of humanitarian effort, whose object is to heal wounds and drive away disease and give strength in place of weakness. Wherefore we pray that Thy blessings and the light of Thy countenance shall rest richly upon those assembled here today, and grant, Oh God, that these men, these representative

men, who are going in and out in various communities as leaders with their special mental equipment and advantages they have had, must necessarily have a larger grasp of life than the average man; they must necessarily have a wider vision of life than the average man as they go out and in before the people of their communities. Wherefore we beseech Thee to let Thy blessings rest upon these men today and upon all of us and direct us into the proper channels, and when the day's work is done may they have that rest which they so richly deserve. We pray for all of these things through Jesus Christ, our Lord, Amen.

THE PRESIDENT: We will now have an address of welcome by Hon. T. C. Underwood, Hopkinsville, on behalf of the city.

ADDRESS OF WELCOME BY MR. UNDERWOOD.

Mr. President, Ladies and Gentlemen: It is not what one says nor yet the way he says it that really counts, but what he means, and I assure you that my intentions are honorable, and so I simply say, you are welcome, welcome to our choicest hospitalities, for I am a person of a few words, although they are sometimes overworked. (Laughter.)

I only wish that I had the inexhaustible verbal resources of Webster—Noah, who built the Ark, and the transcendent genius of Shakespeare, and my tongue had been touched with the magic wand of Apollo, the god of eloquence, that I might fittingly welcome you. For we have no wondrous words of welcome that the people of this community would not heartily endorse. Besides, it is so delightful and so novel to have a lot of doctors visit us and not have to worry about the fee. We are glad to have you, not only on account of your attractive personalities and our natural graciousness, but for many other reasons. For one, you are the conservators of health, and that to the average man is the most important thing in all the world, for upon it depends the happiness and the welfare of his household. Then, too, it has a very important bearing upon public morals, for volumes might be written on the intimate connection between crime and disease, and then next to the weather we are having now it is the greatest incentive to conversation. We say, "How are you?" The Frenchman says "Comment vous appelez vous?" The German "Wie gehst," and the Russian something that sounds like a hay fever explosion. It all means about the same thing: it's the universal salutation, and whenever it is uttered it advertises the doctor, however ethical he may be.

The poet has said:

"We may live without poems
And music and frills,
But civilized man cannot
Live without pills."

Here in Hopkinsville we have three bakeries and a drug store on every corner. The Scripture is right when it says "Man cannot live by bread alone." If the ladies get together, two or three of them, to discuss their ailments, it is a sort of organ recital. (Laughter.)

I was chosen to greet you to-day, not merely on account of my pulchritude, nor my prominence, but on account of the rather undue familiarity I have had with doctors. Perhaps it was an ancestress of mine spoken of in Mark 5:25, or thereabout—"She had suffered many things of many physicians." (Laughter.) Really, it speaks volumes for my present constitution that I am able to be here at all. Perhaps it was a doctor instead of a politician who said "What is the constitution between friends?" I have tried them all—allopaths, homeopaths, osteopaths, sometimes fearing that every path might lead like the path of glory, and still appearing before this assemblage as I do to-day, I feel rather like a freak because I never had my tonsils removed nor have I lost my vermiform appendix. I have never been opened by mistake. (Laughter.)

We are especially glad to have the state doctors with us because we cherish the hope that as a result of their deliberations, conferences, caucuses and discussions some plan may be evolved by which we may eat, drink and be merry without to-morrow's fate staring us out of countenance. Bill Nye once wrote:

"I'd rather have a good alimentary,
Than be covered all over with passementerie."

And we all know that

"Some little bug is going to find us some day,

Some little bug will creep behind us some day,
With a nervous little quiver

He'll give cirrhosis of the liver;
Some little bug is going to get us some day."

—(Laughter.)

"In the days of indigestion, it often is a question

As to what to eat and what to leave alone,
Every microbe and bacillus has a different way to kill us

And in time they all mark us as their own.
There are germs of every kind in any food that you may find

In the market or on the bill of fare;
Drinking water's just as risky as the so-called deadly whiskey,

And it's often a mistake to breathe the air.

"Eat a slice of nice fried onion and you're fit for Dr. Munion,
Apple dumplings kill you quicker than a train

Chew a cheesy midnight rarebit and a grave you'll soon inhabit

O, to eat at all is such a foolish game;

Eating huckleberry pie is a pleasant way to die,
Sauerkraut gives softening of the brain,
When you eat banana fritters every undertaker titters
And with joy the casket-makers go insane."

Yes, we are glad to have you because yours is the noblest and most useful of all professions. There is none other that requires so much learning, so much training, so much skill, so much patience, and so much inspired common sense. To you we confide our innermost secrets. To you we commit unhesitatingly the lives and safety of our loved ones. You have no eight hour day; you are ready to work every hour in every day to relieve pain, to combat all the ills that flesh is heir to, to grapple with the grim monster himself, to pour out your lives to prolong the lives of others, and you do it with a self-sacrificing allegiance to duty, a courage, a heroism that is glorious and Christ-like. Truly, we welcome you to our hearts and to our homes. (Loud applause.)

ADDRESS OF WELCOME FOR CHRISTIAN COUNTY MEDICAL SOCIETY.

H. C. BEAZLEY, Hopkinsville, delivered the following address of welcome:

Mr. President, Ladies and Gentlemen: As a representative of the Christian County Medical Society, it gives me great pleasure to welcome you to-day in her name. For a year we have been joyfully anticipating this meeting, and, at last, we are made happy by the confirmation of our hopes. The day is at hand and you are with us.

We are glad to look into your faces and see there the earnestness, the ambition, and the hope characteristic of every medical body. Nothing great in this world can be achieved without enthusiasm. Out of it is born the will to do, the soul to dare, prophetic of success.

We believe that the presence of so large a body of representative physicians of Kentucky presages a successful meeting, and it is the sincere hope of the Christian County Medical Society that the hours you spend with us may be pleasant ones, and that after you return to your homes, and resume the cares, the joys and the burdens which make up the substance of your lives, that the memory of these days may linger long to help you and to cheer.

The sunshine and the shadows of twelve months have come and gone since our last state meeting. Twelve months of progress, of earnest endeavor; twelve months of investigation in an unlimited field of science; twelve months of therapeutic administration of the needs of suffering humanity.

You come to-day bringing with you the re-

sults of your experiments and experiences, and with that spirit of altruism characteristic of the ethical physician, you lay them before your brothers for their erudition and indirectly for the benefit of every member of this good Commonwealth.

I trust that in some measure you will lay aside your dignity as doctors and know each other to-day only as friends and comrades.

It is eminently fitting that we should pause for a moment in the whirl of business life and should come together at least once a year for an occasion of this kind.

A crying necessity contemporaneous with this age is for medical fraternalism. The medical society has long since been lifted from the doubt of misconceived effort and placed within the pale of medical resources. Every successful effort at promoting harmonious relationship between members of our fraternity is attended by unailing and happy results.

We should not lose sight of the fact that one of the purposes of this meeting is to cement anew the bonds of fraternal feeling between our members.

We want you to enjoy these days with us. We want you to forget the ambitious and crowding cares of life, and in so far as is consistent with the duties of this Association, let us all, young and old, be boys again.

"Men are only boys grown tall,
Hearts don't change much after all."

We would like to make possible for you a few days in which you can wander back at will through the mystic maze of youthful necromancy, when life's panoramic pictures seen through a golden mist were garlanded with rosebuds and dream ideals were rainbows of promise just a span beyond the grasp; when each day was a poem complete, and life itself seemingly a perpetual song, tuned by heart throbs through the daylight and the dark.

There is something in the sterner realities of most lives which have power to dispel the glamour of adolescence. The fairies of childhood fold their wings and fade away before a practical world. Happy are they who at times, though rarely, can feel their pulses thrill and hearts beat quick as the music of some juvenile emotion awakens to a sympathetic accord the harp strings of the soul.

Our hearts and our homes are open to you to-day, and our best wishes will follow you at the close of this meeting, when you will go out to sow anew the seeds of altruism and self-sacrifice—principles which will never die as long as Nature reproduces her flowers or human hearts cherish loved objects on earth.

In the list of human virtues, I think that love stands supreme, and while scholars have

delved into the realms of science and out of the phases of life woven philosophy, they have promulgated no purer code of ethics than that given to the world which has as one of its precepts, "Love thy neighbor as thyself."

Life's real heroes are those who bear their own burdens purely and lend a helping hand to others; and there is a beautiful compensation in this in that while we feel and toil for others, the pressure of our own burden is lighted. And then I think, at last, in looking backward over the course that we have run and the deeds that we have done, that our acts of kindness will live in memory apart from all the rest, like a jeweled star in the diadem of kings.

"Life means to us a thousand different things,
The highest are the ones we miss;
Yet a warning voice unceasing sings,
Life is eternity's parenthesis."

May your lives of usefulness be as the quenchless stars in the pure heavens, burning calmly above—lights which will still endure when the glowing lamps of earth are all extinguished and the scenes about them have lost their illusions.

May smiles of joy, bright as sunlight, overspread your faces, and may your eyes shine through the tears of life's petty sorrows, with a richer luster than that which gilds the falling waters of crystal fountains.

Welcome brother physicians to what we have and are. Mere words cannot express all that we cherish for you in our hearts. (Loud applause.)

W. G. KINSOLVING, of Eddyville, delivered the following

RESPONSE TO THE ADDRESS OF WELCOME.

Mr. President, Ladies and Gentlemen: We are glad to be here in this beautiful city in Christian county, one of the best counties in the State. We are glad to meet these good people, and we have greatly enjoyed the kind words of welcome by Mr. Underwood and Dr. Beazley. Our reception has been made so pleasant and cordial that we are bound to feel welcome, and now in behalf of the Kentucky State Medical Association, allow me to tender our thanks and express our great appreciation for this very cordial reception.

Ladies and Gentlemen, we have met here from all parts of the great State of Kentucky as members of the Kentucky State Medical Association, one of the best in the world, and we are glad to welcome these visiting doctors from other states.

We have met here for the purpose of interchanging opinions upon the various subjects that pertain to the prevention and cure of disease. We have met here to get acquainted with each other, to cultivate professional soci-

ability, and thereby eliminate petty jealousies, enabling us to unite in solid phalanx to fight disease and promote health and happiness throughout our land and country.

Ladies and Gentlemen, one of the most important questions before the profession and the people is to prevent disease. "An ounce of prevention is better than a pound of cure." It is better to prevent small-pox, cholera, consumption, or any other disease, than to try to cure it after it is in progress. The time is coming when the physician's duty will be, not so much to cure disease, but to teach people how to keep well.

Formerly small-pox was a dreadful scourge, and when it made its appearance the people were horror-stricken; and well they may because it was one of the most loathsome diseases, and death claimed about one-half of its victims, and the other half that survived were so disfigured that they were horrible to behold.

But the immortal Jenner taught us how to prevent smallpox, and now by vaccination and quarantine it has become one of the mildest of the contagious diseases, and if we could eliminate the ignorance and prejudice against vaccination we could totally obliterate the disease.

Formerly cholera was like a great monster, stalking over the earth, destroying thousands, even millions; and now in countries where the people are crowded, filthy and ignorant, it is a great scourge; but in enlightened nations, by proper quarantine and intelligent application of sanitary science the nation is saved from fearful destruction.

Diphtheria, like a destroying demon, has for thousands of years traveled all over the world, held high death carnival, and filled the earth with weeping and mourning, because there was no way of checking its cruel onslaught. But thanks be unto science, a remedy has been discovered by which thousands have been saved from death and millions more will be saved.

Antitoxin will not only prevent the disease, but cure it after it is in progress if sufficient doses are used.

Before the discovery of antitoxin, physicians sat by the bedside of children and witnessed them dying a most horrible death, their last agonizing look being a heart-rending plea for help that could not be given; but now such scenes have changed. In the majority of cases in a short time after the first dose is given the expression of suffering and death is changed into tranquil relief and ease, and the little sufferer is restored to life, and there is joy in that family.

For one hundred and fifty years yellow fever was a plague in Cuba, and was spread to our southern shores. It was thought the in-

fection was carried in clothing, and our Government would maintain a quarantine all around our Southern coast at a cost of several hundred thousand dollars annually, but they never kept out a single case. They were ignorant of the cause.

Dr. Carlos Finlay announced to the world his great discovery, that a certain species of mosquito was the cause of the disease. But they laughed him to scorn and derision and treated him with contempt and dishonor. Amidst all this he remained calm and confident. It was soon proven that his theory was correct, and now this fearful disease is almost stamped out, and the name of Finlay goes down in history among the great benefactors of earth.

But one of the greatest achievements for sanitary science was the construction of the Panama Canal. It had been in contemplation a long time. The French, at one time, undertook the project, but failed because they did not understand sanitary science. Yellow fever and malignant malaria destroyed them so fast that it was impossible to proceed. But when our Government undertook the job, Colonel Gorgas, a medical officer, and a master of sanitary science, was given full control of the sanitary conditions. It took him two years to banish yellow fever and malignant malaria from the Zone and render it a healthy country in which to live. Then they proceeded with the construction of the Canal, and succeeded with one of the grandest achievements in all the history of the world.

This is a wonderful record and reflects a halo of glory upon sanitary science, and shows what our profession can do when properly backed by the Government, and proves clearly that we should have an all time health officer in every county in the State. (Applause.)

This is indeed a great era in the progress of surgery, and the achievements along this line have been very brilliant. I would not pluck one leaf from the laurel wreath that bedecks the brow of any surgeon, because he deserves them all; but I want to speak a word of cheer to the "boys in the trenches," who face the brunt of the battle and acquit themselves with just as much honor as any surgeon. (Applause.)

When I see the good, true, honorable physician, like the good soldier, fighting upon every battlefield and making able combat against all kinds of diseases; when I see the general practitioner, who is not only a good physician, but a true man as well, with a heart as true as steel, I am ready to say there is one of earth's noblemen. And when I contemplate the good he has done and is doing, the many pains he has relieved, the many hearts he has made glad, the many tears he has dried, the many lives he has saved, and

the influence for good in the community in which he lives, I am ready to scatter flowers in his pathway and write his name among the good of earth, because he is one of God's chosen instruments for the accomplishment of grand achievements. (Applause.)

I would not utter one word of dissention, but plead for that perfect harmony in every department of our profession which would bind us all in one grand bond of brotherly love. Let us all work for the promotion of science, the healing of disease, and the good of our noble profession.

It has been said the greatest praise that can be given anyone is that he has done his duty; and the noblest epitaph on his tomb is "Well done, thou good and faithful servant, enter thou into the joy of thy Lord."

Although the warrior may in letters of blood write his name high upon the scroll of fame; although an Alexander may conquer the world and weep because there are no more worlds to conquer—remember that the physician or surgeon or specialist, who does his whole duty to his patient, to himself, to his country and to his God, does no less than Cherubim and Seraphim in their loftiest flights and holiest songs.

And after he has made his last prescription; after he has performed his last operation; after he has journeyed far down the descent of life and has reached the river, may his transit o'er be calm and serene, then on angel's wings sweetly wafted, onward and upward through the ether blue, higher, higher, still higher, until he has reached the sunny shore, there to gaze with eyes enraptured on the pearly fields of science and of heavenly glory.

Ladies and Gentlemen, again allow me to thank you for your cordial welcome. (Loud applause.)

At the conclusion of Dr. Kinsolving's remarks, W. B. McClure said: I move that the Chair appoint a committee of three to look up, if possible, the President-elect of this Association and notify him of his election, and escort him to the platform.

T. A. FRAZER, Marion: I second the motion. (Carried.)

THE PRESIDENT: I will appoint on that committee Drs. Dixon, McClure and Todd.

Dr. Board having been escorted to the platform the President said: The time has come when, according to custom, the new President assumes the reins of government over this body. We do not need very much government. The members are very easily led, and in leaving the office of President, perhaps it is becoming in me to tender to you my most hearty and heartfelt appreciation for the signal honor which you conferred upon me by elevating me to this position. The work has not been arduous; it has been pleasant, and

entirely so. I have tried to discharge the duties of this office as best I could. I have brought to their discharge my very best efforts, and now that I am to turn over or surrender the chair to the new President, I bespeak for him that same kindly consideration which has been extended to me throughout the entire term of my incumbency.

I will ask Dr. Todd to present Dr. Board to us. Dr. Todd is one of our oldest ex-Presidents and desires to speak to you briefly before Dr. Board assumes the Chair.

C. H. TODD: I am very proud of the honor you have conferred upon me today. Forty years ago, when the State Association met in this city, I was present and was elected Senior Vice President. In 1878 when this society met at Frankfort I was elected President, and presided at Danville the following year on the occasion of the dedication of the monument to Ephriam McDowell, the great ovariotomist. I was actively engaged in the practice of medicine where I resided almost fifty-two years, and I hope to be present at our meeting next year.

Allow me to introduce Dr. Board to you. (Applause.)

Dr. Board, in accepting the Presidency, said: Fellow Members of the Kentucky State Medical Association, Ladies and Gentlemen: I am profoundly grateful for the honor which the Council has conferred upon me by electing me to the Presidency of this body, for it is the consummation of the highest ambition that come to a Kentucky doctor.

In assuming this Chair and this gavel, I have a pardonable pride, but it is a pride mingled with sorrow when we remember that the duties which I am to assume, so far as this office is concerned, properly belong to, if he were here, and would be discharged by the greatest American surgeon that Kentucky has yet produced. (Applause.) And yet great as were his services as a surgeon, distinguished as he was in his profession, to those who knew him intimately he was known to be infinitely greater as a man. I refer, as you know, to our lamented President-Elect, Dr. Ap. Morgan Vance. Dr. Vance was every inch a man. He was square; he was sincere; he was loyal, and the most unselfish man I ever knew.

A year ago it was my pleasure to take somewhat an active part in his election to the Presidency of this body; I derived a great deal of pleasure out of this, and looking back over it to-day I think I can say—in fact, we can all of us say who participated therein, even though we may not have supported him—we are now proud that we honored him before it was too late.

I am peculiarly grateful that this honor came to me at a meeting held in Hopkinsville, for it was here that I came as a young man

and spent five of the happiest, as well as of the most profitable, years of my life amongst people who for intelligence and culture and true hospitality have no peers in all our Southland. (Applause.)

As this honor came to me somewhat unexpectedly, I have made no preparation, and will therefore not burden you with a so-called presidential address, but will now proceed with the business of the meeting. (Applause.)

REPORT OF COMMITTEE ON ARRANGEMENTS.

R. L. WOODARD, Chairman: There will be an entertainment given at the Elks Club Thursday Afternoon for the visiting ladies, after which there will be an automobile ride around the city and county.

Thursday evening, at 7:30 o'clock, the Association will be the guests of the Christian County Medical Society to see the photoplay Ramona, after which there will be a reception and dance at Hotel Latham, and the tickets for all of these receptions will be handed you at the Registration Desk.

J. N. McCORMACK: Before we proceed with the reading of papers, I notice in the audience the presence of Dr. Coombs, of Terre Haute, Indiana, Secretary of the Indiana State Medical Society. I move that Dr. Coombs be invited to take a seat on the platform and to take part in the scientific proceedings of this Association during its sessions. I have known Dr. Coombs as a Councilor and co-worker for years, and it is a great pleasure that I welcome him as a representative of a great state to-day.

Motion seconded and carried.

C. W. Dowden, Louisville, read a paper entitled "Value of Blood and Urine Examinations in the Diagnosis of Nephritis."

The paper was discussed by Drs. Frank, Bronner, Heizer, Meyers, Anderson, Sargent, and the discussion closed by the author of the paper.

B. B. Keys, Murray, followed with a paper entitled "Functional Heart Diseases; What Are They and How Treated?"

The paper was discussed by Dr. Boggess.

P. E. Blackerby, Erlanger, read a paper on "Training Physicians for Social Health Work," which was discussed by Drs. Frazer, and Frankel.

D. H. McKinley, Winchester, read a paper entitled "Simple Modification of Milk from the Viewpoint of the General Practitioner," which was discussed by Drs. Gary, Morrison, Tuley, Boggess, and discussion closed by the essayist.

E. A. Stevens, Mayfield, delivered the Oration in Medicine. He selected for his subject, "The Future of the Medical Profession in Kentucky."

On motion the Association adjourned until 2:00 P. M.

FIRST DAY—AFTERNOON SESSION.

The Association re-assembled at 2:00 P. M., and was called to order by the President.

C. G. Hoffman, Louisville, read a paper entitled, "Non-Tubercular Infections of the Kidney," which was discussed by Dr. Bronner, and in closing by the essayist.

A. O. Pfingst, Louisville, read a paper entitled, "Suppurative Ears; Their Relation to Life Insurance Risks."

William R. Thompson, Mount Sterling, read a paper entitled "Tuberculosis in Relation to Life Insurance."

These two papers were discussed by Drs. McClure, Jenkins, Anderson, Stucky, O'Connor, Tuley and Kincaid.

J. Rowan Morrison, Louisville, read a paper entitled "Tubercular Meningitis," which was discussed by Drs. Boggess and Miller.

Joseph C. Bloodgood, Baltimore, Maryland, gave a lantern slide talk on "Bone Tumors."

S. M. Crowe, Centertown, contributed a paper entitled "Rational Treatment of Typhoid Fever," which was read by the Secretary in the absence of the author.

The paper was discussed by Drs. Moss, Hall, Stevens, Anderson, Kincaid, Dickinson, Earle, Bailey, Neel, South, Miller, Cain, Stilley, Boggess and Bartlett.

On motion the Association adjourned until 8:00 P. M.

FIRST DAY—EVENING SESSION.

The Association re-assembled at 8:00 P. M., and was called to order by the President.

C. C. Bass, New Orleans, Louisiana, gave a lantern slide talk on "The Problem of Malaria."

Joseph C. Bloodgood, Baltimore, Maryland, followed with a lantern slide talk and demonstration on "The Cancer Problem."

J. N. McCormack moved that a rising vote of thanks be extended to Drs. Bloodgood and Bass for their highly instructive and entertaining addresses.

Seconded and unanimously carried.

The Secretary stated that he had been instructed to announce that the House of Delegates would meet at 8 A. M. the next morning, (October 26) instead of 7 P. M. as provided in the program.

On motion the Association adjourned until 8:30 A. M., Thursday.

OCTOBER 26.—SECOND DAY—MORNING SESSION.

The Association met at 8:45 A. M., and was called to order by the President.

S. Cohn, Fulton, read a paper on "Some Important Diagnostic Points the General

Practitioner Should Know About the Ear."

H. G. Reynolds, Paducah, read a paper entitled "Some Important Points the General Practitioner Should Know About the Throat."

These two papers were discussed together by Drs. McClure, Pfingst, Crenshaw, Stucky, Miss Hunt, South and McCormack.

H. E. Prather, Hickman, read a paper on "Forceps Delivery."

J. B. Lukens, Louisville, followed with a paper on "Puerperal Infection."

These two papers were discussed together by Drs. Speidel, Anderson, O'Connor, Reynolds, Reddick, Willmoth, Dixon, Frank, South, and discussion closed by Dr. Lukens.

P. H. Stewart, Paducah, read a paper entitled "Indications for and prognosis of Prostatectomy," which was discussed by Drs. Abell, Wathen, Dowden, Frank, and discussion closed by the essayist.

W. L. Gambill, Jenkins, delivered the Oration in Surgery. He selected for his subject "Then and Now in Surgery."

The Secretary moved that Dr. James H. Letcher, Henderson, who was elected Secretary of the Kentucky State Medical Association when it met in Hopkinsville forty years ago, be invited to address the Society and tell the members the condition of the society at that time.

Seconded and carried.

Dr. Letcher thanked the Association for the kind invitation extended to him to address it, but said he had nothing in particular to say at this time. He was glad to be present at this meeting, and had enjoyed the papers and discussions which were very instructive.

On motion, the Association adjourned until 2:00 P. M.

SECOND DAY—AFTERNOON SESSION.

The Association re-assembled at 2:00 P. M., and was called to order by the President.

Carl Norfleet, Somerset, read a paper entitled "Expectorants; Mode of Action and Symptomatic Indications."

J. N. McCormack, Bowling Green, read a paper on "Anterior Poliomyelitis," which was illustrated with slides.

The paper was discussed by Drs. Cottell, South, Heizer, Barbour, Owen, Moren, A. T. McCormack, Dixon, and in closing by the essayist.

John D. Trawick, Louisville, contributed a paper on "Significance of Abdominal Pain in Children," which was read by Dr. Barbour in the absence of the author.

W. A. Jenkins, Louisville, read a paper entitled "What Can the Internist Do for Infections of the Biliary Tract?"

Irvin Abell, Louisville, read a paper enti-

tled, "Indications for Cholecystectomy and Cholecystotomy."

These two papers were discussed together by Drs. Anderson, Dowden, Meyers, Sargent, Wathen, Frank, Boyd, Stewart, and discussion closed by Dr. Jenkins and Abell.

S. J. Meyers, Louisville, read a paper entitled, "Rheumatism from the Modern Point of View," which was discussed by Drs. O'Connor, Dowden, Caudle, Jenkins, and discussion closed by the essayist.

On motion, the Association adjourned until 9:00 A. M., Friday.

FRIDAY, OCTOBER 27, 1916—THIRD DAY—.. MORNING SESSION.

The Association met at 9:00 A. M., and was called to order by the President.

C. R. Lanahan, Louisville, read a paper on "Pruritus: Its Causes and Treatment," which was discussed by Drs. Dowden, Asman, and discussion closed by the essayist.

John A. Snowden, Winchester, read a paper on "The Home Treatment and Cure of Morphine and Opium Addicts, With a Tabulated Report of Fifty-Two Cases."

The paper was discussed by Drs. Stevens, McKeehan, Earle, Sargent, Overby, Board, and discussion closed by the essayist.

Bernard Asman, Louisville, read a paper entitled, "Excision and Immediate Closure of the Operation for Ano-Rectal Fistula," which was illustrated with lantern slides.

W. B. Owen, Louisville, read a paper on "The Albee Method of Treating Potts' Disease," which was illustrated with lantern slides.

Frank Boyd, Paducah, read a paper entitled, "Bony Ankylosis of Joints and Their Treatment."

A. D. Willmoth, Louisville, read a paper entitled, "Fractures In or Near Joints; Diagnosis and Treatment," which was illustrated with lantern slides.

These three papers were discussed together by Drs. Boyd, Owen, Drake, and Wilmoth.

V. A. Stilley, Benton, read a paper entitled, "A Plea for the Compulsory Examination of Students' Boarding Houses in Our Colleges," which was discussed by Drs. McCormack, Thomas, Overby, and discussion closed by the essayist.

On motion, the Association adjourned until 2:00 P. M.

THIRD DAY—AFTERNOON SESSION.

The Association reassembled at 2:00 P. M., and was called to order by Dr. Quinn, of Henderson.

Everett Morris, Oak Forest, Illinois, read a paper entitled "The Detection of Early Pulmonary Tuberculosis."

This paper was discussed by Drs. Von Ruck, Anderson, South, Heizer, Sargent, and in closing by the essayist.

J. W. Crenshaw, Cadiz, read a paper, "Lessons from the Life of a Doctor Incognito; An Appeal to Young Men."

B. P. Earle, Dawson, contributed a paper entitled, "Then and Now."

At the conclusion of Dr. Earle's paper, the President said:

This, Ladies and Gentlemen, completes the scientific program as arranged. Immediately after a formal adjournment, we will convene as a body of citizens and listen to some further remarks from two experts on the management and treatment of tuberculosis, a subject which is rightfully attracting so much attention at the present time.

While the House of Delegates has taken formal action in extending its thanks to the good people of this community, the local physicians, their wives, the citizenship generally, permit me to add upon this occasion my own, and I am sure I voice the sentiments of everyone here present when I express our profound gratitude for the unusual hospitality and the unusually good time that we have had in a social way. So far as I am concerned, having lived here some years, I was not unprepared for that hospitality because I knew it would be here to welcome us when we got here.

The scientific part of the program has seemed to me to be up to the standard of any association I have ever attended, and I bespeak for you all a happy year and a good meeting at Ashland in 1917.

I now declare this body adjourned to convene informally to hear a discussion on the question of tuberculosis by Drs. Morris and Von Ruck.

Drs. Morris and Von Ruck then addressed the body on tuberculosis.

ARTHUR T. McCORMACK, Secretary.

Organic Depression of the Nerve Cell.—According to Butler ether anesthesia produces certain definite anatomic changes in nerve cells of dogs. The severity of the anatomic changes in the nerve cell appears to be in direct relation to the length of the anesthesia, allowance being made for individual variations. An anesthesia of several hours' duration for several successive days produces almost the same degree of depression in the nerve cells as a continuous one of the same number of hours. A state of collapse results from ether anesthesia of eight or more hours' duration. This state of collapse is coincident with profound depression, and is considered to represent the end of constitutional effect of a diffusely acting depressant.

OFFICIAL MINUTES OF THE HOUSE OF DELEGATES OF THE SIXTY-SIXTH ANNUAL MEETING OF THE KENTUCKY STATE MEDICAL ASSOCIATION, HELD AT HOPKINSVILLE, OCTOBER 24, 25, 26, AND 27, 1916.

OCTOBER 24—FIRST MEETING.

The House of Delegates met in the First Christian Church at 2 P. M., and was called to order by the President, Dr. J. W. Kincaid, of Catlettsburg, who said: The House of Delegates will please come to order. The first thing on the program is a report from the Committee on Credentials, Dr. Sandbach, Chairman.

W. S. SANDBACH: We, your committee, have looked over the official roll call and find that the accredited list of delegates from the various counties is correct.

The Secretary called the roll and the following delegates responded during the meetings of the House of Delegates:

J. W. Kincaid, Catlettsburg; J. B. Mason, London; A. W. Davis, Morton's Gap; W. B. McClure, Lexington; A. T. McCormack, Bowling Green; W. W. Richmond, Clinton; E. L. Henderson, Louisville; A. W. Cain, Somerset; J. E. Wells, Cynthiaana; A. S. Brady, Greenup; I. A. Shirley, Winchester; J. S. Lock, Barbourville; W. A. Ashbrook, Lancaster; R. H. Porter, Glasgow; J. N. Bailey, Fredonia; R. Lee Bird, Covington; W. E. Senour, Bellevue; J. A. Ryan, Covington; C. W. Shaw, Covington; W. Z. Jackson, Arlington; W. S. Sandbach, Casky; J. W. Harned, Hopkinsville; D. H. McKinley, Winchester; T. A. Frazer, Marion; C. H. Todd, Owensboro; J. W. Pryor, Lexington; A. H. Barkley, Lexington; W. D. Reddick, Lexington; S. Cohn, Fulton; V. G. Kinnaird, Lancaster; E. A. Stevens, Mayfield; J. W. Stone, Henderson; W. R. Moss, Clinton; L. E. Nichols, Dawson; Louis Frank, Louisville; S. J. Meyers, Louisville; J. G. Sherrill, Louisville; C. G. Hoffman, Louisville; S. C. McCoy, Louisville; S. C. Frankel, Louisville; Herbert Bronner, Louisville; W. B. Owen, Louisville; E. F. Horine, Louisville, Charles L. Heath, Lindsay; G. S. Brock, London; F. G. LaRue, Smithland; M. E. Alderson, Russellville; T. L. Phillips, Kuttawa; Horace Rivers, Paducah; E. W. Jackson, Paducah; C. B. Koebert, Lebanon; L. L. Washburn, Benton; E. E. Palmore, Strode; Joe M. Ferguson, Central City; E. D. Burnett, Anchorage; Carl Norfleet, Somerset; R. W. Frey, Trenton; W. L. Heizer, Bowling Green; J. A. Grider, Smith's Grove; F. D. Cartwright, Bowling Green.

THE PRESIDENT: As there is a quorum

present, we will proceed with the first order, which is the reading of the Minutes of the House of Delegates of the 1915 meeting.

J. GARLAND SHERRILL: I move that the reading of the minutes of the 1915 meeting be dispensed with.

Motion seconded by Dr. Meyers and carried.

THE PRESIDENT: Report of the Program Committee by J. G. Gaither, Chairman.

J. G. GAITHER: In making up the program for this meeting the titles of papers were obtained by correspondence with the associate editors of the KENTUCKY MEDICAL JOURNAL. Each associate editor was requested to suggest a number of titles and from these suggestions subjects were selected. We submit to you the program as it is. That is all we have to report at this time.

THE PRESIDENT: What will you do with this report?

W. L. HEIZER: I move the report and the program be adopted.

Seconded and carried.

THE PRESIDENT: Report of Committee on Arrangements by R. L. Woodard, Chairman.

R. L. WOODARD: Your committee has arranged a regular program for Thursday afternoon and Thursday evening. On Thursday afternoon the visiting ladies will be given a reception at the Elks' Club from 3 to 4 P. M., after which there will be an automobile ride around the city and county.

Thursday night the Association will be the guests of the Christian County Medical Society at the photoplay Ramona, following which there will be a reception and dance at Hotel Latham. Tickets for these various functions will be handed to each member as he registers.

THE PRESIDENT: Reports of Officers come next. These reports have been published in the last issue of the KENTUCKY MEDICAL JOURNAL. Is it the wish of the House of Delegates that these reports be read?

S. J. MEYERS: I move that the reading of them be dispensed with.

THE SECRETARY: If every member of the House of Delegates were as conscientious as Dr. Meyers and spent sufficient time in reading these reports, they would be able to act on them intelligently without them being read, but many times questions are asked about these reports which would not be asked if the delegates had read them carefully as published in the JOURNAL. There are so many real live problems before the profession that I think it would be better if extracts from these reports were read to you, and I would like to read extracts from them.

THE PRESIDENT: In regard to a report from your President, I have no report to make other than to say that I think the As-

sociation, as shown by the Secretary's report, is in a prosperous condition both as to membership and finances.

The Medico-Legal report is full and complete, and shows the wonderful work that has been done under the direction of its most excellent Chairman, and it leads us to believe that the work of that Committee has become so crystallized, that its efforts are meeting with more pronounced success each year of its existence.

As President, I have not been called upon to visit any of the component county societies during the past year. I would say, however, that I believe the councilors are not as active as they should be, or not as active as it was intended they should be. They are not visiting their different societies as they formerly did, and it takes visitation to keep up and sustain the interest. There are not so many conditions to be smoothed out by the councilor, but merely to let the boys in the trenches, so to speak, feel that they have an interest in the society, and they should be urged to attend meetings and take more interest in their county societies and in our excellent JOURNAL.

If there is no objection, the salient features of the Secretary's report will be read; the statistical part of it can be omitted because that can be read at any time by any member.

The Secretary then read extracts from the reports of the Council and report of the Secretary. (For reports of Council and Secretary, see KENTUCKY MEDICAL JOURNAL, September 1, 1916, Pages 462 and 474.)

In connection with the reading of these extracts the Secretary made the following comments: There is one problem at the beginning of my report that confronts Dr. McClure and myself. We have between four hundred and six hundred members of the Association who are just members, who never know anything about what the Association is doing. They are just not out and yet not in. They pay their dues a month after the meeting; they do not get the JOURNAL; they do not attend the Association meetings and are not protected by the medical defense. They do not enjoy the material benefits of the organization, yet it costs them as much as the rest of us. On the first day of April of each year, under the postal law we are compelled arbitrarily, without regard to the previous condition of servitude of the man who has not paid his dues, to put him in the non-membership list. He goes out automatically. He has not the advantages of medical defense. Now, we would like some method devised by which the county societies can be held in line in this respect. Speaking from personal experience, I know how hard it is to collect medical accounts, and it seems to me that frequently we are trying to make the county secretary, who

gets nothing for his arduous work, do as much work in collecting dues from us as the average patient makes us do in collecting our bills from him. We ought to be helping the secretary to collect dues, and to see to it that they are paid before the 1st of April of each year. I believe if the delegates will present this to the members of the county medical society, the members would understand the necessity for it, and they would write their check on the first day of January as they would for an insurance policy or lodge dues. It is purely a matter of business.

THE PRESIDENT: You have heard the report of the Secretary. What will you do with it?

HORACE RIVERS: Regarding the adoption of the report of the Judicial Council of the American Medical Association, you say in your report that you do not want this Association to agree to it.

THE SECRETARY: This matter was before the House of Delegates at the American Medical Association at the Detroit session. We were instructed at the last meeting of the Association to formulate a protest against it as it is subversive of our constitution. Our constitution provides that any matter of ethics before a county society shall be referred without discussion to the Board of Censors with an appeal to the district councilor or the Council, whose decision shall be final. Since the organization eighteen years ago there have been two appeals to the Council. At the meetings of this Association years ago from three to five days were spent in listening to personal grievances. At a meeting of this Association, held in Shelbyville, many years ago, five days were spent in the trial of one of the most distinguished men this state has ever produced for being five minutes late at a consultation. They had a big row over it. That sort of thing was frequent in medical societies all over the United States under the old plan. Under the constitution of every state society the decision of the Council in matters of ethics is final and those constitutions were proposed by the Committee on Organization of the American Medical Association.

A few years ago there was active politics, in the worst sense of the word, in the Chicago Medical Society which had very great influence in the work of organization of the American Medical Association, and it looked as if some of the members of the Chicago Medical Society might be left on the outside, those having local differences and jealousies, and the constitution of the American Medical Association has been insidiously changed to cover this possibility for the last five or six terms, so that an appeal might be made to the Judicial Council.

The Judicial Council of the American

Medical Association has had before it in the last year for trial the late John B. Murphy, the greatest surgeon in this country, if not in the world; Drs. Stuart McGuire and George Ben Johnston, of Richmond, Virginia, two of the cleanest and greatest medical men the South has produced, because a cartoon was published in a Richmond paper of the two latter gentlemen. Dr. Murphy was tried because his picture appeared in connection with a photograph of his office in his *Surgical Clinic*.

When the whole profession is suffering seriously from evils that we all know about; when it is the most underpaid of any profession and is most seriously handicapped because of lack of income; when there are thousands of questions of procedure that are at issue and of importance, it seems to me the time of this great organization and the splendid men who compose its Judicial Council should not be taken up in such trivial trials that are absurd on the very face of them. These trials take up the valuable time of busy men, and they are not only ridiculous and absurd, but are not befitting the dignity of such a great organization. If this goes on, every little difference will finally have to be settled in the higher court.

Our important proposition is what are we going to do to make better doctors and care better for the health and lives of the people that depend upon us, and not have our time and that of our leaders taken up in splitting hairs over little technical differences incident to so-called ethical conduct. I am satisfied the profession is too dignified, too important to be imposed on in this way, and we as an Association should take a firm stand in this matter, and when that stand is taken it will be settled right, and that is the important thing for us to do.

LOUIS FRANK: Is there any way by which the American Medical Association can compel us to abide by its decision or compel us to proceed to its viewpoint in the question of appeal?

THE SECRETARY: I do not know of any way by which they can do that. They may refuse to seat our delegates, but I am satisfied they will not. That is possible but not probable.

LOUIS FRANK: That is the question that came to my mind. In questions that the state society precludes on appeal, there is no necessity of our paying any attention to these things at all unless we can get all the societies to do it.

THE SECRETARY: There is no reason for us taking action unless we desire to preserve the right to settle questions of membership and ethics at home.

THE PRESIDENT: Under the reorgani-

zation of the medical profession, starting with the county and ending with the American Medical Association, the doctrine of state rights has been recognized all the way through. The county society is the unit of organization, and it has a right to decide on the qualifications of its members, subject to appeal to the state society through its Board of Censors known as the Council, and in these instances the decision of the Council is final. That is the language of Section 2, Chapter VII of the By-Laws. If the American Medical Association chooses to have a different standard for membership in it, I do not see how we can do anything. I do not see any action we could take other than protesting would be effective. Especially is that true as to the manner of transacting its business. The first amendment to which we objected was the amendment to the By-Laws changing the order of business. Technically, no new business can be introduced unless it comes out of a committee, council or standing committees. That is arbitrary. A delegate should have a right in a delegated body to get up and make any statement, and then the House can refer what he wants done to a committee, but he ought to be heard.

J. GARLAND SHERRILL: I move the adoption of the Secretary's report, and that a copy of the report pertaining to this matter be sent to the American Medical Association, because if we do not make a protest they will not know our feelings in the matter. Seconded.

J. N. McCORMACK: Before that motion is put, I would like to speak with reference to a condition in the profession in Kentucky just mentioned in the report. For the last year my health has been better than it has been for many years. It has been my intention for some time to spend a year or eighteen months in visits to the various counties of Kentucky and attempt to revive the spirit of organization in such counties as it has died out. Dr. Heizer and I were in Nelson County the past week. I spoke at Owensboro Sunday night. I would like by appointment to visit county after county, meet members of the profession first, and talk to them about the principles and purposes of organization for upbuilding the profession, thus enhancing the interest as well as professional spirit, and to improve public sentiment in supporting various principles which the President is now advocating. I could visit the various towns in the counties, talk to members of the profession and to the people, using lantern slides, and talk about the problems of the County Health Officer. Before the next legislature meets I could visit every county in the State. I have wanted to bring this matter before the medical profes-

sion and I do not know of a better opportunity for doing it than now.

In discussing the Secretary's report I would like to make a proposition to the Society, in regard to which I shall be glad to get the co-operation of the profession in every county. While we have now what we consider the best organization in the United States, I would make an attempt to make it 100 per cent. better than it has ever been, and I believe it is possible to do that with the cooperation of the profession and my colleagues connected with the State Board of Health. I could make these visits before the next session of the General Assembly if it meets with the approval of the profession.

THE PRESIDENT: I think the delegates present, as well as the profession, owe a debt of gratitude to Dr. McCormack for his activity in their interests, and as a means of reviving interest in the Association some definite action should be taken on his suggestion after this report is adopted.

The first thing before the House is, shall the report of the Secretary be adopted as read, with the instruction that the formal protest of this Association be specifically called to the attention of the American Medical Association.

Motion of Dr. Sherrill put and carried.*

J. T. REDDICK: As a delegate from McCracken county, I extend to Dr. McCormack a warm invitation to come to our county for the purpose designated by him.

THE PRESIDENT: I think every county should consider itself fortunate to have Dr. McCormack come to it with this message to the profession and to the general public. His public lecture in Boyd county a few years ago did more good than anything done there in years, in that it stimulated a better feeling between the general public and the profession. Perhaps some provision should be made for Dr. McCormack's expenses in connection with this work.

J. N. McCORMACK: There will be no expense, Mr. President, so far as I am concerned. (Applause.)

THE PRESIDENT: The report of the Treasurer is the next order.

W. B. McCLURE: The report of the Treasurer is published in full in the KENTUCKY MEDICAL JOURNAL. The accounts have been audited and approved by the auditor, and there is no excuse for me to take the time of the Association in making any further report. I will simply say that the balance is on the right side of the books. It is hard to keep it there but we have done so. (For report, see KENTUCKY MEDICAL JOURNAL, September 1, 1916, P. 465.)

THE PRESIDENT: What will you do with this report?

It was moved that the report be adopted.
Seconded and carried.

THE PRESIDENT: Report of the Council.

The Secretary read the report of the Council and moved that it be referred to the appropriate committee.

Seconded and carried. (See KENTUCKY MEDICAL JOURNAL, September 1, 1916, P. 462.)

THE PRESIDENT: The next order is reports of Councilors by districts.

REPORT OF COUNCILOR OF THE FIRST DISTRICT.

W. W. RICHMOND, Clinton: It was my purpose to have made a written report in regard to the First District, and it is largely due to the dereliction of duty that I have not done so. However, I want to say that the thirteen counties which compose the First Councilor District, with the exception of three or four counties, are in good condition. Two or three of the counties are doing better work than they have ever done since the reorganization of the medical profession in Western Kentucky. In point of membership and dues paid in, some have paid more than ordinary, others have paid less. I do not know the exact amount of dues. In fact, I have not asked the Secretary, hence I do not know. Some dues have been paid in since the regular cast up, and that may mean more than the report will show.

THE SECRETARY: About 100 more for the State.

W. W. RICHMOND: We have participated in that increase somewhat; I do not know the amount. The organization of Western Kentucky is in quite as good condition as it has ever been and, with the exception of three or four societies, the work has been of a high class order. Two or three societies in the First District have done better work. Graves county has been doing the best work that it has ever done, and perhaps no county society in the State has done more real good work than it. They have certainly been very industrious, and have had most excellent meetings throughout the year. The plan adopted by the societies in Western Kentucky has been successful, that is, the cooperation of two or three county societies during the year in holding joint meetings. I have attended several most excellent meetings, some of them lasting two or three days. Two or three societies held what we may call camp meetings during the past summer, and most excellent meetings were held jointly by two or three of the county societies cooperating. They would meet on the campus in some place selected and spend a couple of days in society work, reading papers and discussing them,

and catching fish. The plan of meeting jointly now and then has been adopted and is most excellent.

I think McCracken county has been doing good work and has been holding its own. Perhaps there is a little increase in its membership over last year.

J. T. REDDICK: One less.

W. W. RICHMOND: There have been one or two since the final report. At any rate, McCracken county, in which Paducah is the center of society, has been doing excellent work and high grade work. I do not know this from personal observation because I only visited this society the early part of the year, but I have been told by the members outside that the work has been of a high standard and on a high plane.

Carlisle County is one of the best little counties and has one of the best societies in the State of Kentucky. They have held meetings continuously from year to year; they are doing excellent work and holding up to their membership. They fell short one member, Mr. Secretary, which was due, to Dr. Simpson being crippled, there is a loss of one in membership.

We have three county societies in my district that are doing very little or no good. The cause of failure upon the part of these societies is largely due to some friction existing in them, which I think will be overcome in due time. I have one society in mind in particular, the Calloway County Medical Society. There is a little friction there among its members. There are two factions, the one having the largest membership in the society are together, but there is a minority. In other words, there is friction which must be overcome, but it has not been done so far, and this has caused a large falling off in the membership of that county. Two other counties are in the same condition. I won't say that I do not think I have done my duty quite as thoroughly as I should have done, but from work I intend to do I hope to improve two or three counties in the near future and which are the cause largely of the falling off in membership and in dues in the First District. It is not general. It is not throughout the district, but is confined to two or three counties that have not done much. I think it will be remedied in a short time, and I am making plans and working to that end, and I am satisfied that if things work out as I think they will, the membership in Western Kentucky will be better in the near future than heretofore.

THE PRESIDENT: Speaking for the House of Delegates, I do not think Dr. Richmond needs to feel discouraged over the fact that the membership as reported in his district is not quite up to its usual standard. We know he has been a faithful worker in years

past, and I am sure he will do all that he is able to do to keep up the interest and membership. Our thanks are due to Dr. Richmond for his most efficient work throughout these many years as Councilor of the First District.

W. W. RICHMOND: I have not given up the fight, Mr. President, as I think the First District will show up pretty well with the rest of the State as it is.

THE PRESIDENT: Report of Councilor of the Second District.

THE SECRETARY: Dr. Graham has moved from the State on account of ill health, and I move that the Secretary and President send him a telegram of sympathy and hopes for his speedy restoration to good health.

Seconded and carried.

THE PRESIDENT: Report of the Councilor from the Third District.

THE SECRETARY: Dr. Rau is absent.

A report of the Councilor from the Fourth District was called for and passed.

THE PRESIDENT: Report of the Councilor from the Fifth District.

THE SECRETARY: Dr. Hibbitt is on the border with the State troops. I would like to say for him, in the presence of three or four ex-councilors, he has been one of the best councilors the State has ever had. His success has been largely due to the very effective work of Mr. Singer, Resident Representative of the American Medical Association in Louisville. But the work has been most efficient, and the large increase in membership shown in the Fifth District has been due in a considerable degree to the splendid work Dr. Hibbitt has done. There are more workers in Jefferson county than in any other county in the State, that is, more doctors who are willing to go to the county society and help do good work, and more doctors from Jefferson county appear on our program this year than ever before. The profession is delighted at the increased activity of our Fifth District friends and will enjoy seeing this growth continue in Dr. Hibbitt's absence while he is fighting for his country, and while it is a pleasure to know we will have him again before a great while to fight for and with us, (Applause). the Council has selected Dr. E. L. Henderson as Acting Councilor during Dr. Hibbitt's absence.

THE PRESIDENT: Report of the Councilor from the Sixth District.

REPORT OF COUNCILOR OF THE SIXTH DISTRICT.

R. C. McCHORD: The Sixth Councilor District is composed of the counties of Adair, Boyle, Green, Mercer, Taylor and Washington.

The profession in my district is thoroughly organized, and practically every doctor in the district is a member of his county society.

The average membership in this district for the last five years has been 90. For this year, 1916, there is an enrollment of 96 in the county society, an increase of 4 members over that of 1915. Whilst there has been an increase of membership, yet the work in the societies has not been what it should be. This is accounted for to a certain extent, by the fact that very many of the doctors in this district are members of two lively district societies, which meet quarterly.

Nearly all the county societies have adopted resolutions, condemning Fee Splitting, and I am glad to know that there are but very few members who are guilty of this unlawful practice. In this connection, I desire to express the gratitude of the profession of the State to a doctor in my district, in the person of Dr. Basil M. Taylor, of Greensburg, who had the courage to quit his practice and go to the State Senate, introduce and have passed by the legislature an act making it a penal offense for doctors to split fees.

THE PRESIDENT: We will now listen to a report from the Councilor of the Seventh District, Dr. Cain.

REPORT OF COUNCILOR OF SEVENTH DISTRICT.

A. W. CAIN: I regret to report that Casey county which at one time was almost the banner county in the Seventh District is at this time doing the poorest work of any county in the district. Since the death of Dr. Wesley, it seems almost impossible to get any one there to undertake the load. It has been impossible to get an efficient secretary, and therefore exceedingly difficult to get anything like good work done. They have ten members in that county who have paid their dues, but they have only had three or four meetings during the year, and those meetings have been fairly well attended. We have changed secretaries time and time again and the society has failed largely because we have been unable to get an efficient secretary. I feel that this is one of the counties which need to be revived through the influence of Dr. McCormack, and then the society will go on as it did once before.

As to our organization, I think every doctor in Casey county belongs to the society, but has not attended the meetings regularly although it was for a long time one of the best county societies in the State.

Clinton county has seven members in the county, six of whom have paid their dues. The society meets regularly during the summer and fall. During the winter they have such miserable roads that it is almost impossible to get any of the doctors who live out of town to attend.

Garrard county is doing good work. They have nineteen doctors in the county, sixteen

of whom have paid their dues. They meet regularly and are doing good work. I should have said that Garrard county has eleven doctors who have paid dues.

The Lincoln County Medical Society has seventeen members who have paid dues, and they are doing good work.

McCreary county is doing better work than any other county in the district. They only have eight doctors in active practice in the county, seven of whom are members of the society. They meet regularly once a month and are doing efficient work.

Pulaski county has 18 members who have paid dues, that society has done as much good work this year as it usually does. Their time has been taken up with another matter which will come before the society—an unfortunate condition of affairs which has taken up time to the disadvantage of the scientific work.

Perfect harmony exists in the county societies so far as the doctors are concerned. There is no friction, and all the doctors are willing to work. I have not been able to visit Russell county. This county society holds meetings regularly and is doing fairly efficient work. All of the doctors in Russell county, who are at all engaged in regular practice belong to the society. It is one of the best societies in the district. The doctors are all enthusiastic, are working in perfect harmony, and they are doing very, very efficient work.

Wayne county is also doing good work. They have nine doctors who have paid dues. They have not over eleven doctors engaged in practice in the county; ten are doing regular practice, and nine of them have paid dues and attend the society meetings regularly.

The doctors in Wayne county I think probably use more serum in the treatment of their cases than any other society in the district. All things considered, I think the district is doing very good work, and we have much more material to work on. There are very few doctors who are doing anything like a general practice who are engaged in practice that are not members of the society. We cannot get new members because we have not good material to work on. We must do more efficient work and try to get the societies to do likewise. As I have said, except Casey county, all the other counties are doing splendid work.

THE SECRETARY: While it is not right to make invidious distinctions, I think Dr. Cain is following in the footsteps of Dr. Wesley, of whom he was a disciple, in doing the most effective, quiet work in the State. I had the opportunity of being present at the meetings of two of his societies without the members knowing I was to be there. No additional attendance or lack of attendance was observed because I happened to go. They did not know

I was coming. Every doctor in both counties was present when I got there. Dr. Cain discussed with them the material problems which confront the profession. He talked to them about the things happening to them. He talked to them about their pocketbooks, their heads, their hearts and souls. He talked to them about the practical aspects and management of local and state societies. He went into details in a way that these men appreciated what he said. They took an active interest in his message. They are building sanitary privies up there in his district, concerning which the State Board of Health has been doing intensive work, in fact they are building as many sanitary privies there as they are in any part of the State. No physician will be eligible to membership in a County Board of Health next year unless he has built sanitary privies and cared for the proper disposal of excrement of his own family and cares for the property he owns. They are doing that work there through the inspiration of Dr. Cain, and I am glad of this opportunity to bear testimony to what he has been doing.

I hope Dr. Cain's expense account will be pretty large because we can generally measure a man's efficiency by the work he has accomplished and the amount of traveling he has done.

THE PRESIDENT: Report of the Councilor from the Eighth District.

REPORT OF COUNCILOR FROM EIGHTH DISTRICT.

J. E. WELLS, Cynthiana: In the fourteen counties comprising the Eighth Councilor District there are 258 members who have paid their dues this year, making it the second largest district in the State in regard to number of members, being surpassed only by the First District which has 310 members. And the City of Louisville furnishes 266 of that number. The counties showing an increase in membership are Campbell-Kenton, Fleming, Jessamine and Mason. Bracken, Grant, Pendleton and Robertson have each lost one member since last year. Harrison has lost three members and Nicholas four members. The total, however, shows a gain in the district over last year of one member. Bracken county is the only county in the district that has failed to keep up the organization. This year five have paid their dues. I have made repeated efforts to keep up the organization in Bracken, but have failed.

Bourbon county, with good material, has a membership of only fourteen, and are not taking the interest in their meetings that they should.

Campbell-Kenton has a membership of one hundred members and has a good active society. They have a live secretary, but he has been so very busy this last week raising \$50,000 for Spears' Hospital that he could not

write and tell me of all the good things they have been doing in Campbell-Kenton for the past year. Fleming has twenty-two members; and there are but two physicians in the county who are not members; and one of these is very old and inactive. Their meetings the past summer were irregular, due to the fact that the secretary was sick and away from home.

Grant has a membership of thirteen, having only one physician in the county who is eligible who is not a member, and I hope by next year they will be able to enroll this man and break the unlucky number of thirteen, and then perhaps the interest will be better, and that they will become enthused in the good work and meet regularly.

Harrison county has twenty good members, and has a meeting the first Monday evening of each month. They have not missed a meeting in fifteen years, and they are all good meetings too.

Jessamine has eleven members leaving only two eligibles in the county that are not members; meetings are irregular and very poor.

Mason has a membership of twenty-four with nine non-members; do not meet regularly; members do not take proper interest in the meetings.

Nicholas, with nine members, heads the list in loss of numbers, having lost four since last year, and they show but little interest in the meetings.

Pendleton has eighteen members, and there are but two physicians in the county who are not members. I had the pleasure of attending one of their meetings this past summer, and if that was a fair sample, they are doing good work. They have a good active society.

Robertson has four members; no regular meetings are held and but little interest shown.

Scott has eighteen members, every eligible physician in the county being a member; they meet regularly and the members take an interest in the meetings. The Secretary tells me that no physician is allowed to remain in the county unless he becomes a member of the county society. That kind of spirit will make a good society in any county.

Woodford has ten members—just members. no active interest is taken.

I regret that some of the best counties in the district do not take the interest in the society work that they should. With the high class of men they have, I cannot understand why more interest is not taken.

Some of these counties have very good societies, but they are not up to the standard. Any of these that are ambitious and want to do better, are cordially invited to attend the Harrison County Society the first Monday night in each month of any year.

REPORT OF COUNCILOR OF THE NINTH DISTRICT.

THE PRESIDENT: In the absence of Dr. Brady, I am gratified to report that we have an increase of nine members this year in Boyd county. The attendance has been very good on the average, and great interest is taken in the meetings by those who attend. They mark their interest by their attendance.

REPORT OF COUNCILOR OF THE TENTH DISTRICT.

I. A. SHIRLEY, Winchester: As it is perhaps unnecessary to tell you, the Tenth Councilor District has during the past year kept steadily in her former course, onward and upward. I very much regret that owing to having had no accounts from the Secretaries in the seventeen counties comprising the district, I am not prepared to give an itemized statement of affairs in them. I have with the exception of Fayette and my own county of Clark, nothing official as to memberships for the past year. Of course, this does not mean I have had nothing from the secretary of the State Association, but as you who have had experience with that high official know how unreliable reports from that source usually are, for the five year contract we are to the good about twenty members, while he makes us short five when compared to 1915. He says we lost two in Fayette, while the secretary of that society tells me that we gained two. He says we lost seven in Clark, while our secretary, from lists shown me, reveals a loss of but two; so you see that instead of losing five we are at least even seven. According to the report of the State Medical Association Bath gained one, as did Lee, Letcher two, and Rowan one, while we lost three in Montgomery, two each in Estill and Fayette and seven in Clark. I have already explained how woefully he was mistaken in Fayette and Clark, and taking these two counties as examples I am inclined to the opinion that nearly, if not all, of them showed gains instead of losses. At any rate, if any gentlemen are here from any of the counties showing losses or those showing gains that are not big enough, if they will only hold up their hands I will join them in having Dr. A. T. McCormack assassinated for trying to steal away our good names. (Laughter.) I regret to be compelled to report the loss from cancer of Dr. C. F. Clark, Winchester, the removal of one from our county, and the practical retirement of another, so you see how our apparent loss is accounted for. As to the removal, we will say that was before unknown; every man who before him has ever lived in Clark has either lived there yet or removed to the cemetery. This single exception, let me say, came from a mountain county and the smooth level roads in Clark did not offer enough jolting and other diversion to suit his heretofore performances, so he hiked to his former abode ere his greatness

early vanished. So you see, gentlemen, the difference between the accounting of the county secretary and the secretary of the State Association is considerable, and as I have already found the reports of the former absolutely accurate, I can account for the incorrect reports of the high-up official as a determined, diabolical effort on his part to prevent, if possible, the best, beyond question, district of them all from keeping ahead of the procession. But let him try as he may he cannot do it.

I have also to report with much sadness the death of Dr. J. W. Williams of Powell, which accounts for the shortage of one from that county. Then, too, we lost our beloved and honored brother, Dr. A. M. Glass of Booneville. Strange to say, these two last gentlemen and brethren together with Dr. Clark of my own county, whose death I have already mentioned, were the victims of that ever-dreaded menace to human life—cancer. May the good Lord ever be with the widows and orphans of these splendid physicians and gentlemen to comfort and support them in their trying hours of sadness and bereavement.

Permit me to say in conclusion, that everything good that has happened in my district, as well as maintaining the organization so well, was due entirely to the splendid spirit of the men composing the various county societies as the councilor has gone among them seldom as they of their own inclination keep the fires constantly burning.

REPORT OF COUNCILOR OF ELEVENTH DISTRICT.

J. S. LOCK, Barbourville: Taking the Eleventh Councilor District as a whole, we have an increase in membership, with a falling off in one county of two. I am sorry that there has been a general lack of interest throughout the district in society work for this year. I do not know how to account for it. We have practically every eligible member in the district as a member of the societies, yet we have a few that are eligible, and we are unable to get them to attend. I do not know why it is.

Before we go further, I want to say as a councilor of the eleventh district that we extend to Dr. J. N. McCormack a cordial invitation to visit that district, every county in it. He can arrange his dates and we will be ready to receive him.

The individual societies keep up their membership fairly well, paying the dues.

I am sorry we have not shown more activity with reference to sending papers to the KENTUCKY MEDICAL JOURNAL as we usually do from our district.

Bell county has always been our banner society for work, but this year it has been a little less active than previously. My own county, I am glad to say, continues on the honor roll. We have lost three from the county this

year, these gentlemen having moved to other states, with one moving in and holding membership in an adjoining county society. I visited some of the counties in the district; some I have not. Like Dr. Richmond, I am frank to admit that I have not done my whole duty during the year. In some of the counties I have tried to arrange meetings and have failed. I do not know whether it is due to me personally or to lack of interest shown by the secretary in trying to hold meetings. We hope to continue to make a good showing in the eleventh district. I believe that we have been the banner district in the past two years, but I am not positive whether we can claim the blue ribbon this year or not. I do not know what I can do more than I have done to get the doctors more interested in society work. I hope by the proposed visit of Dr. McCormack we will receive new enthusiasm and the work will be revived and go on and on until we have the entire district on the roll.

THE PRESIDENT: We all realize that Dr. Lock has been an efficient and industrious worker, and I am afraid he is minimizing the efforts he has made during the past year, perhaps a little bit more than he is justified if the facts were known. We are all waiting for the Dixie Highway to be completed, and then we are going down to see your work.

I believe that completes the reports from the councilor districts.

THE SECRETARY: Before we call the roll for reports from county medical societies, I would like to say that the death of Dr. Ap. Morgan Vance was officially reported by the Council, and I move that the delegation from Jefferson County be appointed to prepare a suitable memorial to be published in the Minutes of the Association on the loss of this distinguished physician, with Dr. Sherrill, President of the Jefferson County Medical Society, as Chairman.

Motion seconded and carried.

REPORTS OF DELEGATES BY COUNTIES.

THE SECRETARY: If it meets with the approval of the House of Delegates, I will call their names, and what reports we do not get at this session we can get at a subsequent session.

CARLSIE COUNTY MEDICAL SOCIETY.

W. Z. JACKSON, Arlington: I am glad to report that our county society is in good working order and doing splendid work. We have eight members who attend almost every meeting. Nothing but sickness or something unusual prevents them from attending. They all take part in the discussion of papers. We have one member, however, who joined us and paid his dues, but I do not believe he has at-

tended a meeting of the society since. I learned that he is expected to leave the county. Dr. Simpson who has always been a regular attendant and a good member, got crippled more than a year ago and is not able to get about. He sustained a broken hip. We have another man who is in and out. Some years he is with us, then he drops out again, and it is hard to get him in. But the members who have been attending our meetings are interested in the work all the time. We have two other men who have retired from practice. I believe that is all the report I have to make at this time.

CHRISTIAN COUNTY MEDICAL SOCIETY.

J. W. HARNED, Hopkinsville: Our society meets on the third Tuesday of each month. We have an enrollment of fifty members. Last year we had fifty-one. Three of our members have moved to other states during the year. We have had eleven meetings during the year, and at all of these meetings but one paper was read and discussed. Nearly every physician in the county is now eligible for membership. Our attendance has been from fifteen to fifty, with an average of twenty-five during the entire year. We have held joint meetings of the Trigg, Todd and Christian County Medical Societies in the Stuart Memorial Hospital. We were guests of the hospital and were served with an elegant dinner. At this joint meeting there were papers read by Dr. Haggard, of Nashville, and a doctor from Evansville. The September meeting was a business meeting. Out of eleven meetings we have had two or three dinners. These dinners seem to bring a crowd. I think it always brings a crowd when you have something to eat. I find that out-of-town physicians attend better than town physicians. We have had on an average during the year twenty-five active members.

CLARK COUNTY MEDICAL SOCIETY.

D. H. McKINLEY, Winchester: We have a total of thirty physicians who are engaged in practice, twenty-five of whom are members of the county society. We have held regular meetings throughout the year, at first twice a month, and for the last six months once a month. Little interest has been taken, however, and the attendance is usually small.

We are just building a thirty bed hospital, and we have reason to feel gratified over it because it originated and was made possible through the activities of the Clark County Medical Society.

FAYETTE COUNTY MEDICAL SOCIETY.

A. H. BARKLEY, Lexington: I think it is the intention of Dr. Redmon, who is not present, to send in a written report. When I left he asked me to say to the House of Delegates

that we have seventy-three members on the roll, and we have not missed a meeting this year. While there are some men who are not members, it is hoped that with the efficiency and energy of Dr. Redmon we will get them in. I presume he will file a written report.

THE SECRETARY: I wish to call attention to the fact that Dr. McKinley, Dr. Reddick and Dr. Kinnaird who are new members of the House of Delegates, are the sons of three distinguished members of the medical profession of Kentucky. Their fathers were officers of the State Association at the time they were engaged in active practice, and were three of the best men we have had in the active profession of the State. These three young gentlemen come to us with greater responsibility than that imposed upon the ordinary doctor, and it is to be hoped that these splendid young men will carry on the good work their fathers did before them.

GARRARD COUNTY MEDICAL SOCIETY.

V. G. KINNAIRD, Lancaster: We have thirteen practicing physicians, eleven of whom are members of the society. We meet monthly. The attendance is good. Our society is getting along very well.

GRAVES COUNTY MEDICAL SOCIETY.

E. A. STEVENS, Mayfield: Our society has thirty-eight members. Dr. Hunt, our secretary, was not able to give me the necessary minutes when I left, but that is my information that we have thirty-eight members. Part of our society work has been in meeting with our neighbors. We have had two meetings with our neighboring county medical societies, McCracken and Marshall, and they have been well attended. Great good has come out of them, and we have quite a number of laymen attend these meetings. We think it has done more good than anything we have had in the past.

The society has for its secretary Dr. Hunt, who has been extremely efficient, and I think we have made more progress in the last twelve months than we have ever made in two or three times that amount of time before.

HICKMAN COUNTY MEDICAL SOCIETY.

W. R. MOSS, Clinton: We have fifteen doctors in the county, fourteen of whom are members of the society. Thirteen live in the county, and one outside of it. We have monthly meetings through the summer. We meet in the various precincts of the county. We have had one outing in the woods for the doctors, and we now think we can entertain the Southwestern Kentucky Medical Society. We are all in good condition, all paid up, and we have three members present at this meeting.

JEFFERSON COUNTY MEDICAL SOCIETY.

J. GARLAND SHERRILL, Louisville: The meetings of the Jefferson County Medical Society are held every Monday evening at the City Hospital, Louisville, and we shall be glad to have any of the members of the State Association who are visiting Louisville to attend these meetings.

With regard to the Workmen's Compensation Law, it does not compensate the attendant for the work which he is called upon to perform. The maximum fee is \$90 to cover the attendance of the surgeon, nurse, the dressings, and hospital is ridiculously low. I believe that when the attention of the compensation boards is called to that fact in the proper way by the State Association, with a proper amendment proposed to the legislature, that feature will be corrected. The whole matter is a delicate subject at present because it is in its infancy and needs to be handled with great care.

THE PRESIDENT: It is a source of gratification to hear of the continued progress of the Jefferson County Medical Society. Personally, I feel the loss in the absence from the KENTUCKY MEDICAL JOURNAL of the proceedings of the Jefferson County Medical Society. I wish, at least, half of their meetings could be published, as I am quite sure we would enjoy reading them and would profit by it as well.

THE SECRETARY: I move that that part of the report referring to Workmen's Compensation be referred to the Committee on Workmen's Compensation Law, as it is one of the purposes of that Committee to suggest such an amendment of the law as Dr. Sherrill has called our attention to.

W. W. RICHMOND: I second the motion. (Carried.)

KNOX COUNTY MEDICAL SOCIETY.

CHARLES L. HEATH, Lindsay: We have seventeen members who have paid their dues this year, and as Dr. Lock has said, three have left the county. Two of them are still in the State and one has left the State. One man came from Bell County, and we are one member short of last year. There are two doctors in the county who are eligible to membership, they are practicing, and one never has been a member of the county society. The other has been a member of a county society but not of Knox county. Of the two who were members last year, one was a candidate for State Senator. The other has been selling books, but he has quit that job and has gone back to the practice of medicine again.

We have had some sort of a meeting nearly every month in the past year. Last spring we made an effort to get all of the midwives in the county to attend our meeting to instruct

them in regard to the law requiring the use of nitrate of silver in newborn babies' eyes. Unfortunately, at the time of that meeting I was sick with the grippe and did not get there, but it was reported to me that a great many midwives attended the meeting. I sent notice to forty of them. I understand that nearly half of that number were present and took great interest in the proceedings. Some of them have been carrying out the measure, and we believe we have done some good.

It seems that most of our doctors do a general practice or mining practice, and their duties keep them in the mines and they cannot get away very well to attend meetings, so that with the exception of three or four of us who are in the country, they do not have time.

THE PRESIDENT: How many of these nitrate of silver outfits have you furnished to the midwives of the State?

THE SECRETARY: We have furnished them to only a few midwives so far because we did not have the money to do so, but we hope to get money a little later for this purpose.

LAUREL COUNTY MEDICAL SOCIETY.

G. S. BROCK, London: In our society we have not accomplished much, so I have not much to say. We have seventeen practicing physicians in our county, fourteen of whom have paid their dues. We hope to collect 100 per cent. dues next year.

LIVINGSTON COUNTY MEDICAL SOCIETY.

F. G. LARUE, Smithland: I am not familiar with the situation in Livingston county. I left there in July. On account of bad roads we have never had an active county society. I believe, however, that if we could get Dr. McCormack there for a few days we could do some good. I do not know what the reason is for this inactivity. There does not seem to be any friction, but there is a lack of enthusiasm on the part of the physicians.

LOGAN COUNTY MEDICAL SOCIETY.

M. E. ALDERSON, Russellville: I am glad to report that the Logan County Medical Society is still alive and active, with a membership of twenty-four. We meet the first Monday of every month. We are doing first class work, and each member is alive to the best interests of the society and the profession at large.

M'CRACKEN COUNTY MEDICAL SOCIETY.

J. T. REDDICK, Paducah: I believe our secretary reported forty-four members this year, one less than that reported last year. The report was made in September. During the last year I believe one or two of our members have died, notably Dr. John G. Brooks, a distinguished ex-president of the Association,

who was seriously ill at the time of the last meeting. He was in a sanitarium and died there two days later. Dr. Brooks in his day was one of the most eminent physicians in Western Kentucky and in the State.

Perhaps our county society has not been as active during the past year as it was the year before, especially in the number of meetings and so forth. But, as has already been referred to by Dr. Stevens of Graves county, the joint meetings with our sister county societies have been of marked benefit. There were three held, one in McCracken county, one in Graves, and one in Marshall, at which we held picnics or barbecues. Laymen were invited and it did them good. One of the reasons why we have not been as active perhaps is that our councilor has not been as active. Dr. Richmond's vigor is not as great now as it has been; his eye is not so keen, his health is not so good, and his step is not so quick as it was when he first began to serve us as councilor, but the esteem and confidence with which he is held throughout the district still hovers with us, and he has won a warm place in the hearts of the doctors of Western Kentucky, and with his cooperation as councilor we will move along in good shape during the next year.

FULTON COUNTY MEDICAL SOCIETY.

S. COHN, Fulton: The Fulton County Medical Society tries to have its meetings on the 15th of every month. Our meetings are very instructive and interesting. We will try to meet more regularly in the future. We have not made a report to the Secretary as we might have done, but we hope to in the future.

PULASKI COUNTY MEDICAL SOCIETY.

CARL NORFLEET, Somerset: The Pulaski County Medical Society has been more active than it was last year.

We have held regular monthly meetings with good attendance. Of the thirty-two physicians in the county, eighteen are members of our county and state societies. Many of the non-members are aged and inactive.

Our membership represents the most active, wide awake and progressive spirits of the profession.

Our program of papers for the year has not been so productive as it should have been, yet some good papers have been read.

Our clinical work has been plentiful and interesting. Much of our time for the last two months has been devoted to business, which may be termed under a heading of "ways and means" of handling a clouded proposition.

WARREN COUNTY MEDICAL SOCIETY.

W. P. DRAKE, Bowling Green: Warren county has forty-seven paid-up members. Our acting secretary has been called to

the border to fight Mexicans and his substitute has been active in collecting dues. Since last week seven more members have paid their dues, so that now we have fifty-four paid-up members.

The physicians of Warren County and dentists employ a county and district nurse. It is the first time in the history of the county or of any county that the doctors themselves have employed a nurse. We did that for a year. Each doctor has paid a small sum of money every month, and next year the Fiscal Court and City Council continued that work.

Our work for this year has been largely devoted to helping the Chamber of Commerce to build a county and city hospital.

We have regular monthly meetings. We meet on the second Wednesday of each month. Our attendance is usually good. We have good programs and lively discussions. Our society has done more active work this year than it has in previous years.

MARSHALL COUNTY MEDICAL SOCIETY.

L. L. WASHBURN, Benton: Our society meets on the third Wednesday in each month except January, February and March. The reason we do not meet in January, February and March is because of the road conditions being so bad that the members in the different parts of the county cannot very well attend the meetings. The attendance this year has been better than usual, and we attribute it largely to the joint meetings we have had. Most all doctors in the county are members of the county society. We have a few yet who are not members, but in a short time we expect all the physicians in Marshall county to be members of the county society.

THE SECRETARY: Miss Hunt, a representative of the State Tuberculosis Commission, who has been active in the work of securing public health nurses in various counties of the State, is with us this morning. The State Tuberculosis Commission has accomplished nothing else which in any degree compares with the importance of Miss Hunt's work. Nurses have been placed in the various counties in practically every instance where she or Miss Williamson have attempted it. They are effective young women. They are going into homes in cooperation with the medical societies, the county health officers, the members of boards of health, and with the fiscal courts are carrying out a degree of work that we ourselves had not dreamed of at the time the work was started. In many ways it is a most important step in progress in public health work in the State, and before we adjourn I would like to move that Miss Hunt be granted the privileges of the floor and be requested to talk to us about the prob-

Jews that have confronted her in this work. She has not only the active cooperation of the State Association but of every doctor worthy of the name in the profession of the State. We are glad to have been of assistance to her in the work. There are now, I believe, thirty-eight splendid public health nurses in Kentucky who will be the vanguard to carry out the lessons of good health, good living to the whole of our people who so greatly need the services of these splendid women.

W. W. RICHMOND: I second the motion. (Carried.)

MISS HUNT: When we began the organization of public health nurses three and one-half years ago in Kentucky, we thought we were going to work in a field where people were ignorant of the value of a public health nurse. We did not work in many communities long before we found out that the people were better educated to the need of public health nurses and better sanitary conditions than we thought. In three and a half years we have established thirty-eight nurses in the rural districts. All told, we have 100 graduate trained nurses, not only trained bedside nurses, but trained in public health work doing rural visiting nurses' work. While the work is growing and we are doing great good, we have under observation now, or these public health nurses have, over 300,000 children, and the nurses are going all over attending county societies and fraternal orders talking to the people with a view to arousing them to a better public health conscience. Now, we are growing to be such a large family that we are working without a head, and I hope we will be able to get added interest from the medical profession in Kentucky in creating public interest for a full-time health officer. That is the next thing we should have. (Applause.)

In visiting the different counties I make it a point to call on the doctors. Some of them I find very cooperative, while others, if I may be allowed to use a slang expression, are some of the worst pills I have ever met in my life. When you tell them of the great work the Kentucky State Medical Association is doing, and what the visiting nurses are doing, they will roll their fingers in this way (illustrating) and say, "Well, that is a good thing, but I will never live to see it." If there is a doctor in this audience who thinks he will not live to see a bill passed creating a full-time health officer, I want to say to him he had better hurry and die because it is coming in a hurry. (Laughter.) The ignorant class of old-time general practitioners is *passee* in Kentucky, because the people are educated now to a progressive order of things in the medical profession and they are becoming educated in the matter of prevention. I believe

Kentucky is leading every state in the Union in public health work.

From the last report we received from the American Red Cross, the Red Cross Nursing Service started five years ago with an appropriation of \$50,000 a year. They have succeeded in establishing thirty-eight nurses in thirty-eight states. Kentucky started three years ago with \$15,000 and has established forty-three nurses in one state, and, of course, that does not include the staff of nurses in Louisville, Lexington, Paducah and other larger cities.

I feel that the people in the rural districts are becoming educated to the need of prevention, and we want a full-time health officer!

I would like to feel that when a nurse goes out and makes a medical inspection of schools and reports to the doctor or board that she has found children with sore throat that is suspicious, and thinks that the case should be isolated, she should have some head to go to, and that he, the health officer, who should visit the child and say, "Well, it is diphtheria, or at least, we will be careful about it." As it is, when the nurse goes out and finds a case of that kind, she is running over the county until she gets in touch with some authority to isolate the cases, and by the time that takes place, and two or three have been consulted, and we find a difference of opinion, the child is sent back to the school and the contagion of the disease is spread all over the community. With a full-time health officer we would not have that trouble.

There are many people who think that if the public become educated there will not be any need or work for the doctors to do. I can assure you, that if there was some provision made by the state for bettering public health in the rural communities, whereby we could send cases to the cities that have hospitals, such as the City of Louisville or Lexington, or other similar places, particularly the cases of women and children we find in the mountainous districts that need surgical treatment, there would be money enough for doctors to become millionaires in a few years.

I found one case in the mountains a few months ago which shows the importance of having a full-time health officer, and further how important a rural nurse is. I was working in one of the mountain counties. I went to a poor house farm and found five children without a cent furnished them by the county. Their parents died and left them, and no one was interested enough in the children to get them into a home where they would be educated or have any care. But the poor-farm was the first solution. Those five children were there. We found three syphilitic cases, and two of tuberculosis, but the little boy that appealed to me especially was in a room and

looked as if he was one of the class that Charles Dickens wrote about, with a little waxy face, sunken cheeks and hands bright and shiny from fever. When I talked to him I could see at once the child was delirious. I took his temperature and found it was 103 degrees. I began to inquire of the people if they had had a doctor. They said no they had not; they said the boy was always complaining and ailing and they had not paid any attention to him. He was on a cot with no mattress and a gunny sack under his head for a pillow. I found a hip bone was protruding through the tissues, that sloughing had taken place, and in the bed of this gunny sack where the child was lying were about two cups of pus and flies swarming. According to the history I got, the child's parents had died of tuberculosis, and that this little fellow had broken his hip and received no medical attention and no care, and his case had not been reported to the county.

I tried to get the child into a hospital. I went to one of my best friends in the city and asked him to use his influence to help to get the little fellow in the Children's Free Hospital in Louisville, but before I could get him there the little fellow died.

That is one of the thousands of cases we have been finding in Kentucky every year, and when I think of the thousands and thousands of dollars that Kentucky sends to foreign missions, I feel like exclaiming, Kentucky has got her nerve when she sends a penny anywhere outside of the State. (Applause.)

There is work enough in the mountainous districts of Kentucky for two hundred doctors and twenty-five nurses for the next five years in looking after cases like that little boy.

In our work we try to educate the people to better sanitary methods of living, and do all we can to warn them against the use of patent medicines. I am just a regular fiend along that line because I see so often people bunked out of money by some patent medicine faker. I wish all the doctors in Kentucky had backbone enough to fight these things the same as nurses have and then we would get rid of them. We ran one patent medicine faker out of a town.

In another home I visited there was a woman who was very tired and in a run down condition and a fit subject for tuberculosis. I asked her if she had consulted a doctor. She said she had, and that her doctor lived out in Iowa! I find that all these famous doctors so-called come from Iowa! She showed me a letter from him which stated, "Dear Madam, I have found it necessary to call in consultation Dr. So-and-so," and I found that there had been five fine doctors, so-called, all discussing this woman's case. I said to her,

how can they discuss your case and determine what is the matter with you when they have never seen you, they have never examined you, and do not know whether you have syphilis or a sore throat? She did not think about that. She thought that if she wrote down her symptoms they would understand her case thoroughly. She showed me a letter in which the doctor asked for an inclosure of ten dollars. I found one woman who had sent as much as forty dollars a year to this famous doctor in Iowa to cure her of something she never had. When we persuaded her to give up writing to him and to spend several weeks in the country she came back very much improved, and is now a well educated woman along the line of public health, and she does not lose the opportunity to say something against patent medicines. In addition to our work this year in talking to schools and asking for medical inspection, we have already thirty-eight schools inspected in Kentucky, and I am in hopes that Dr. McCormack will be able to furnish us with an additional nurse to go and arrange meetings in farmers' clubs and among their wives, so that we can talk public health and tuberculosis to them in our visits. If we could have one or two nurses to go with us and give lectures on first aid to the injured and teach the people the uselessness of using patent medicines, we would accomplish a good deal more. Do you know, that people in the rural districts spend from \$75 to \$100 a year for some patent medicine that does not do them any good, and if the doctors could win their confidence, and induce them to give that money to us, we would get better results. The field is ripe, but we must have cooperation. I think every doctor who is attending this medical society meeting, whether he is interested in public health work, whether he be a general practitioner or a surgeon, should make it a point to see that the representatives from his own county that go to Frankfort be educated to the end that they will vote for a full-time health officer by increasing the appropriation and work for better health laws in Kentucky. Do not expect Dr. McCormack and a few others to do all the work, but pitch in and do some of it yourselves! You can do a great deal of good if you will only work to send your representatives to Frankfort fully prepared; if you do it, we will not have very much trouble in getting what we desire. You should strive to send business men there, men who have an intelligent grasp of conditions and what is going to benefit the people.

I remember talking to Mr. So-and-so, a member of the legislature. We had a nurses bill we wanted passed to guard against women of immoral character from practicing as nurses in Kentucky. I said to him, we want

that bill passed, and we want you to help us. He said he knew nothing about doctors and nurses and would not study the bill. He said if it has anything to do with doctors and nurses, I am against it, and that is the way some of them view the situation. They are against anything that is for the public good, and if you as physicians will do your part in the respective communities in which you live and send men to the legislature who are half way intelligent, we will do the rest. (Applause.)

THE SECRETARY: At a meeting of the Council held at 11 o'clock, the Council selected Dr. D. M. Griffith, Owensboro, to succeed Dr. Cyrus Graham as Councilor for the Second District to fill his unexpired term.

Dr. Griffith was for many years a councilor of the State Association, and I am sure his selection will meet with the approval of the profession and that everybody in the House will be glad to know that he has been restored to that position.

The Council also elected Dr. Henderson as acting councilor for the Fifth District until Dr. Hibbitt returns from his service in the United States Army.

The Council has selected Dr. Milton Board as President-Elect to fill the unexpired term of Dr. Ap. Morgan Vance. The selection of Dr. Board was unanimous by the Council, and we believe it will receive the unanimous support of the profession of the State. The Council felt it was a recognition of Dr. Board's distinguished services for many years as a representative in a very large way of professional interests. Dr. Board has been a public official for a long time, and at no time in the course of his activity as a physician or as a public official, has he ever failed to obey a call to go to any place where there was a contest threatening public health or any interest of this Association. Dr. Board is the Medical Director under the Workmen's Compensation Law and is familiar with the problems about which Dr. Sherrill made a report, and these problems are very close to his heart, and with Dr. Rubinow of the American Medical Association he has been working jointly to better them. Dr. Board is in closer connection with the administration than any other man, and at the last session of the legislature he was able to secure the passage of very far reaching laws that will be of much benefit to the people of the State, and through him we hope at the next session of the legislature to be able to do some very active work in the passage of a law for full-time health officers about which Miss Hunt has talked to us to-day.

It is hardly necessary to say anything about the dignity and distinction conferred upon any member by elevating him to the Presidency of the Kentucky State Medical Association,

and not only will the elevation of Dr. Board to the Presidency give him increased prestige and increased influence, but we are perfectly confident that his influence will be used, as his whole life has been used, for the benefit of the medical profession of Kentucky.

The Council thought it would be particularly gratifying to select Dr. Board as the successor of Dr. Vance because he was a moving spirit in the election of Dr. Vance last year, and if Dr. Vance's wishes could be known, he would feel as grateful to Dr. Board as he could to any man, and for that reason I feel that the action of the Council will meet with the unanimous approbation of the profession of the State.

On motion of Dr. Richmond, the House of Delegates then adjourned until 7 P. M.

SECOND MEETING OF THE HOUSE OF DELEGATES.

The House of Delegates reconvened at 7 P. M. and was called to order by the President.

THE PRESIDENT: We will listen to further reports from county societies.

HENDERSON COUNTY MEDICAL SOCIETY.

J. W. STONE, Henderson: We have a place in Henderson where we pay our dues. We have had only two meetings this year, and we get very little out of the society. It is unfortunate that such a condition of affairs prevails. We meet and elect officers for a year, no one seems to be particularly interested in the society; the next year the members get tired and another faction elects officers. I do not know what we are going to do unless some outsider comes down there and wakes us up. The society might appoint a councilor to do this. There is some new material coming into the town, really enough to make a very good society, and I believe there is a feeling that we are more likely to get together than we have for quite a while if we could get an object to work for, we could work together in building up a medical society.

We have gotten as far along as any of the counties in the tuberculosis proposition. We have a sanitarium completed, and when the taxes are paid in in December it will be open for the reception of patients. We have done some very good work along that line. We have done a great deal of good work in Henderson in the past with the medical society and boards of health. The fact of the matter is that our city boards of health have now become a stench in the nostrils of the people considering the way they are treated. If they want to secure a health officer they turn out the entire health board and put in a health officer to suit themselves. If the health boards see fit to inaugurate some improvement or carry out sanitary measures for the benefit of the people, opposition is met with. For instance, a distillery down there ran its slops

into the ditch, the odor from which was very offensive to the people of the community. If we undertook to stop that, they raised a row and they declared all positions vacant and they put in a man as city health officer who could not see that the emptying of these slops was disagreeable. It was then said the slops were not running into the ditch at all. We had a pretty warm time and the board of health was done away with. I hope we will get into a better condition some time, and I hope the people will stop the distilleries from running their slops into the ditch, and then we can do something. That is the only hope we have. As an illustration, the town is absolutely controlled by the whisky people. There is no question about that. They elect all the officers and put in whom they please and turn out whom they please. They dug a well and advertised it as exceedingly beneficial from a health standpoint. As President of the Board of Health, about that time, I ordered the health officer to proceed against the distillery, I also had the waters of this well analyzed by our State Authority, and it was reported that it had a sewerage connection. We closed it up. It would seem that some of these people liked slops and said that we were interfering with the slops of the brewery and distillery, and they therefore raised a great ado about it in the newspapers concerning the closing up of the wells, and they got so much indignation worked up there that the councilmen fired the board of health and they immediately put in a man who told me over the phone that he knew the distillery was not running slops in the ditch because he had investigated the matter. That is the way they are treating our physicians and it is engendering a bad feeling. If any physician that stands in with the gang wants a position as city physician or health officer, they go to work and have the board of health discharged and get themselves elected to these positions until it is bringing the medical profession into contempt with the masses of the people which they do not deserve.

When I was President of the Board of Health for a considerable time we reduced the death rate from 18 per thousand to 11 per thousand. We got an ordinance passed to have a complete sewerage system. The first year we began that there were reported 178 cases of typhoid fever; after adopting that plan there were 85 cases of typhoid fever reported. We went on until we greatly reduced the mortality. We made them put in water closets, and after this there were only thirty-six cases of typhoid fever reported. Thirty of them had outside vaults. There was a material decrease in the death rate from typhoid fever and other diseases caused by filth. We reduced the death rate to eleven per thousand, and according to the last account it has been

reduced to nine and a half per thousand. Since that time the health records have not amounted to anything because of wrangling.

We had an ordinance ready to pass for a school inspector and the Council had passed it on its first reading unanimously. Two of our prominent physicians who were on the school board took the notion we were going to appoint some man they did not want as a school inspector, and they let the board of health know and the school board know about it and the ordinance was killed.

We have had epidemics of scarlet fever and measles, two of scarlet fever and one of measles, with practically no control over them at all. So we are in that condition. I do not know that the State Society has any particular interest in it, but it is one of the things in the State that we have to contend with. We must try and work it out as best we can, but as long as there is so much friction we cannot hope to accomplish much.

We had a nurse to whom the City Council was allowing \$50 a month for visiting tuberculosis patients. Two of our friends in the profession took a notion that the nurse was favoring one of the other doctors, and they got the Council to cut off the \$50.

THE SECRETARY: The situation that Dr. Stone has just described is, of course, disgraceful not alone to every doctor in Henderson county, but to the people of that county, who permit their doctors to be treated in such a fashion in this modern civilized age. It is disgraceful to the entire profession of the State and the doctors down there ought to know it. It is typical of the conditions that formerly existed. Most of you older men and some of the younger ones will remember when such things existed in every county in Kentucky, and when we did not realize what a horrible thing it was to have such a situation as the doctor has detailed in Henderson county. We know it is a matter of common knowledge among those of us who are watching the signs of the times that whenever a doctor says an unpleasant thing to laymen about another doctor personally, he is talking about himself and not about the other doctor. He does not know much about him, and when he says an uncomplimentary thing about a doctor, you can take it for granted that he is talking about himself. It is a confession, and not an accusation that he is bringing.

A necessary corollary of the situation Dr. Stone has detailed is found in the representatives in the legislature from Henderson county. They do not believe in medical laws or in any of the measures which we are fighting for the protection of the public health. They do not understand that there can be anything but selfishness, corruption and greed in the medical profession. They see effective, efficient boards of health discharged or injured

without anybody raising a word of protest, and I have enough confidence in the individual members of the profession in Henderson to believe that the fault is not entirely theirs. The individual doctors there have not had a profession for a great many years, and they are worthy of relief from this situation, and I want to suggest, Mr. President, that the President and Secretary and Councilor for the Second District go to Henderson and stay long enough to bring about such a revival in public sentiment as to make this thing impossible.

We are now in a position to go to Henderson and help them. I recall several years ago when a very similar situation arose in one of the mountain counties. Father went up there and delivered an address before the citizens of the county. They were anxious to get a trachoma hospital. He told them of the situation where one doctor was lying about every other doctor, and every man had his knife out, so that the people were not safe. He told them that no doctor was infallible, and there they were individually against one another. Father advised the people of this county to run all the doctors out of the county and take a fresh deal, and the doctors got together the next day because the people told them they were going to run them out. They have had a decent medical profession there ever since.

Henderson county has had more presidents of the State Society than any other city except Louisville. It has had more members of the State Board of Health, and it is our duty to extend to them a helping hand and help clean up this sore spot and assist men like Drs. Stone, Dixon, Quinn, Letcher and their associates, men who are willing to put their hands out and do the decent thing. We should help them to do it, so that Henderson county shall occupy the position it deserves.

THE PRESIDENT: That can be done without formal action being taken on the part of the House of Delegates. I take it, it lies within the province of the councilor and the president to help to smooth out the friction that exists there, and I am quite sure when the secretary associates himself with the other two men, in his suave manner he will be able to pour a little oil on the troubled waters and some good will come out of Nazareth after all. Perhaps it would be considered an affront on the part of Henderson county if we were to take any positive action.

THE SECRETARY: You can't hurt their feelings about the matter, can you Dr. Stone?

DR. STONE: You can't hurt mine.

THE PRESIDENT: It lies within the province of the councilor and president to go there or any other place in the State where their presence will serve to uplift the medical profession.

LYON COUNTY MEDICAL SOCIETY.

T. L. PHILLIPS, Kuttawa: There seems to be a good representation of our fellows and we are trying to push on and keep going.

DAVIESS COUNTY MEDICAL SOCIETY.

J. J. RODMAN: The last report showed 69 members in good standing. Two of those have left; one new member has been admitted, making 68 in good standing at the time of this report. The average attendance at the meetings this year has been twenty-nine, not quite so many as the last report. We lost a valued member by death, Dr. J. W. Knox, whom we all loved.

THE PRESIDENT: You should all strive to stimulate interest in your county societies. We all say it is the secretary that makes a live county society. That is true, but there is something more than simply collecting dues and forwarding them. If you would report the discussion on papers, not necessarily in full, giving the names of the doctors who have participated in these discussions, and a brief resume of what they said, and send it to the JOURNAL and have it printed, it will stimulate interest and attendance. I must confess that when I get my JOURNAL I turn to the reports of meetings of county societies to see what they are doing and how they are doing it.

Are there any other county societies to report? If not, we will listen to the reading of the Minutes of the previous session.

THE SECRETARY: I move that the reading of the Minutes be dispensed with.

Seconded and carried.

THE PRESIDENT: Report of the Medico-Legal Committee.

THE SECRETARY: I move that that be passed until Dr. Moren arrives.

THE PRESIDENT: Report of the Committee on KENTUCKY MEDICAL JOURNAL, Editor's Report, etc.

THE SECRETARY: I have no formal report to make other than to say that the JOURNAL has been issued monthly. I feel I am the editor-in-chief of the JOURNAL and you are all editors. It is very important, it seems to me, for all of us to feel that each one is responsible for what is said in each issue of the JOURNAL. There is an element of responsibility resting on all of us. The profession does not seem to me to realize that proposition as much as they should. For instance, after publishing an article in a recent issue of the JOURNAL by Dr. Carpenter, of Stanford, on Trachoma, with original illustrations, I received letters from several specialists to the effect that it ought not to have been published in the JOURNAL. I told them that it was their JOURNAL and Dr. Carpenter's JOURNAL, and that if they disagreed with him they should say so, and point out the reasons why. Some of them who had had experience with Dr.

Carpenter did not want to do so because Dr. Carpenter has a forcible way of talking back. It is your duty to write to the JOURNAL if you disagree with the article of any author. I will publish every article that is sent in to Bowling Green for publication by the Secretary of any county society. I do not care what anybody says about the author's views. They are not the views of the State Association, but simply the views of that individual writer. If you do not agree with an author write to us and say so, and we will publish your letter. There is no way of making progress in the profession if men continually blame, condemn, or censor the work of the profession. As soon as that time comes about my usefulness to you is ended. I am not fit for the job, unless I can use in the JOURNAL everything each one of you thinks. The JOURNAL is successful. We have got what we consider one of the best state journals that is published. It may not be the best typographically; and we do not use exactly the best grade of paper. We are not chesty about the immaterial things that go into the JOURNAL, but we feel we are conducting the only JOURNAL that publishes everything that comes to it except articles that come from other states, and we do not publish many of them. If you have not now an article for us next year, any of you, do a little thinking and write one. If you should see things in the JOURNAL that are obviously wrong and do not correct them, it is your fault. The JOURNAL is your journal. We cannot make it a success without the critical idea we editors get, and we want you to read it with a constructive idea and to know that we are all working together through the JOURNAL for the betterment of the profession in the State.

On the material side we need your help. On the editorial side we need it very much. On the material side we will continue to need your help as in the past.

We have the most successful state journal in the country because more doctors realize that they own it than in any other state. We get a little more money for a page of advertising than any other state in proportion to the number of doctors because more of our doctor patronize our advertisers than in any other state. One thing has been very interesting to me and it is this: You find large corporations, like Montgomery Ward & Co., or the mail order houses, who advertise, have some sort of key in the doctors' page; they have a card index of all correspondence that they think has reference to that particular publication and they are willing to pay two dollars for each inquiry that they get. In our JOURNAL the cost to the advertiser is less than a dollar for each inquiry he gets. That means most of you are reading the advertisements and giving our advertisers a chance.

Take the advertisements of any medical journal in the United States and read them through and there may be no one behind the advertisements. It is a matter between you and the advertiser. Every advertisement we publish, however, is backed up or has resources behind it. For instance, if you correspond with any firm for anything they advertise in our JOURNAL, if they do not make good, or there is a mistake made in the transaction, without asking questions, we will write you a check for the full amount you lost in the transaction. We have done this, and we are ready to do it with every advertiser we have. You have known from our reports that we reject three advertisements where we accept one. We want you to help us to get the character of advertisements we need to make our JOURNAL better and bigger.

In addition to the advertisements we get from firms who advertise antitoxins or medicines, or sanitariums we want the advertisements of firms that deal in stoves and furniture and all other things that doctors use, and we cannot get them until the doctor helps us before he buys. As soon as the advertiser understands that his advertisement inserted in the KENTUCKY MEDICAL JOURNAL means that the Kentucky State Medical Association stands behind him and agrees to discountenance every dishonest advertisement, and that we will take our chance of getting it out of him, then they understand they get a good thing.

In cooperation with the Cooperative Advertising Bureau of Chicago, we have established a new branch of activity in the JOURNAL under the head of "Why Should Advertisers Use the Space in the JOURNAL." We agree to furnish information as to where you can secure anything you want to buy better and cheaper than you can get it anywhere else. If we cannot, the thing for you to do is to buy it in other places. We have a good organization to offer to the profession of the State, and if you want to buy anything you can get it through the Cooperative Bureau at better prices than you can get it elsewhere.

I received a letter from a doctor in Louisville asking where he could get a particular thing, and it was found he could get it two blocks from his office. In the card index of that particular article kept on file in Chicago they found the reference.

Those are the things that we are studying and working on for the material benefit of the profession incidental to the general work of conducting a journal.

THE PRESIDENT: Report of the Business Manager of the JOURNAL by Dr. South.

Dr. South called attention to the salient features in the report as Business Manager of the JOURNAL, Sept. 1, 1916, P. 477.)

THE PRESIDENT: These reports of the

Editor and Business Manager are open to a general discussion of the JOURNAL. If anybody has anything to say in regard to the conduct of the JOURNAL, now is the time to say it.

J. W. STONE, Henderson: I feel everybody ought to say something about the JOURNAL. So far as I am personally concerned what I have seen and read in the JOURNAL has been entirely satisfactory to me. I enjoy getting the JOURNAL and I enjoy reading it. It is the best state medical journal that I get hold of, and I do not see why we should not let the editor and others know how we feel over it.

THE PRESIDENT: Dr. McCormack made one statement in regard to the point that he would print everything that was sent in. While that is all right, and it is *our* JOURNAL, and we have a right to be heard through its columns, but if there is something that is radically wrong and opposed to the best teaching of authorities, I really believe that we ought not to wait until some subsequent issue comes out to criticize it, but the Editor ought to put in a foot-note or a comment in brackets stating that the author is not sustained according to the best systems of medicine, where the Editor has views that are a little opposed to the writer of the special article. In other words, a sort of caution mark. I think it would be appropriate to do this.

THE SECRETARY: I do it in the form of an editorial frequently.

THE PRESIDENT: It ought to be done in brackets; one may not see the editorial comment on it. It can be done in a very kindly manner of course, calling attention to the diversity of views upon that particular subject.

Is there any further discussion on these reports or in regard to the general conduct of the JOURNAL.

LOUIS FRANK, Louisville: I rise to speak a word with regard to the JOURNAL. While our JOURNAL is a state journal, the articles appearing therein are reviewed in the *Journal of the American Medical Association*. I did not have an opportunity of hearing the discussion on the report of the secretary-editor in regard to the JOURNAL, but attention should be called to the fact that everything that is published in the KENTUCKY MEDICAL JOURNAL is indexed and many of the articles are reviewed not only in the *Journal of the American Medical Association*, but are reviewed in the index which the *Journal of the American Medical Association* gets our quarterly. I have occasion to look up medical literature now and then, and I think the point brought out by the Business Manager of the JOURNAL (Dr. South) is one that should be remembered and impressed upon the membership, and that is the publication of very interesting unusual cases, because we get a review

of them. It is not a review which is merely local, but it is a review which practically extends all over this country and foreign countries in which medical literature is published.

I have read the JOURNAL since its publication, and although I get a number of special journals and state journals I might say it affords me the greatest pleasure to read and go over the publication of our State Society. I believe that the thanks of this House of Delegates are due to those who are conducting the JOURNAL. I feel that we should voice our approbation and approval of the method and manner in which the JOURNAL is conducted. While a few slight errors appear typographically from time to time, those of you who read your own proofs know that it is difficult to catch many little errors, most of which are trivial. These things should not irritate us and should be forgiven.

With reference to the point touched upon by the President, it is not customary for any of the editors or anybody who is behind a medical journal to stand sponsor for the views expressed in any article. These views are merely those of the individual writer upon the subject he is discussing, and it might be interesting for the editor to set aside a page or two for those who object to the views of any individual writer. This would open up an interesting column in the JOURNAL. A little scrap based upon a high intellectual plane from actual observation would be really interesting. It is surprising sometimes to see how men's opinions and experiences differ in writing upon the same subject, yet they may both achieve good results, although their methods are different. I believe when we see these things we should call attention to them. I have seen things in the KENTUCKY MEDICAL JOURNAL that I did not approve of, but I look upon them from a broad catholic viewpoint, and because I did not follow this method or that method, it was no reason why the author should not achieve equally good or better results by following a method different from mine. I have been loathe to take up such things for discussion, but I believe it would open up an interesting column or two in the JOURNAL. I rise to commend not only the editorship but the unusually good management of our JOURNAL. (Applause.)

T. A. FRAZER, Marion: There is one thing about the JOURNAL that strikes me as being one of its strong features. When we read the JOURNAL from month to month, and read the articles by men and women we know we are associated with at least once a year, it creates a brotherly feeling in the profession of Kentucky just as Dr. Thomas said in coming up on the train to this meeting, when we were discussing the JOURNAL, and I am glad to say neither of us criticised it in any way.

Dr. Thomas said he felt a little better every time he read the JOURNAL; he felt a little bigger man and a bigger doctor, and felt the profession was more akin to it, and that brotherly feeling that exists between the doctors of the State of Kentucky is more due to the editorials and the general reading matter of the JOURNAL than any other one feature.

THE PRESIDENT: If there is nothing further in regard to the conduct of the JOURNAL we will proceed with the report of the Committee on Medical Preparedness, Dr. Sherrill, Chairman.

REPORT OF THE COMMITTEE ON MEDICAL PREPAREDNESS.

J. GARLAND SHERRILL, Louisville: On June 20, 1916, I received the following letter from Dr. F. F. Simpson, Secretary of the Committee of American Physicians:

Dr. J. Garland Sherrill, Atherton Building, Louisville, Kentucky.—Dear Doctor: You are cordially invited to become Chairman of the State Committee for Kentucky, representing for that State the Committee of American Physicians for Medical Preparedness.

Kindly signify by prompt acceptance your willingness to serve as Chairman of your State Committee and begin at once the active prosecution of work outlined in the accompanying letter and brief.

Very sincerely yours,

F. F. SIMPSON, Secretary.

P. S.—I would suggest that you urge members of your State Committee to keep in close touch with the local organization in their several communities of the Medical Reserve Corps and of its successor, the Officers' Reserve Corps, Medical Department.

If you will kindly furnish the names of your state President and Secretary invitations will be sent them.

Acting on Dr. Simpson's letter I appointed the following:

L. B. Mason, vice president of the State Association; A. T. McCormack, Secretary of the State Association; Irvin Abell, David Barrow, Frank Boyd, John P. Jackson, and Lewis S. McMurtry.

July 3, 1916, I received the following letter from Major Robert E. Noble:

My Dear Doctor Sherrill: Your letter of July 1 enclosing names of medical men in Kentucky who will be eligible for the Medical Reserve Corps is received. The Surgeon-General requests me to express his appreciation of your interest in selecting the medical men of Kentucky who would be desirable for the Medical Reserve Corps.

Circulars of information and personal history blanks will be sent at the earliest possible moment.

The Medical Department of the Army ap-

preciates greatly the interest of the medical profession, especially that of the Committee of American Physicians for Medical Preparedness.

With best wishes,

Sincerely yours,

ROBERT E. NOBLE,

Major, Medical Corps, U. S. A.

Subsequent to this I received a request from Dr. Simpson for a list of men connected with the various hospitals and sanatoria in the State of Kentucky, first giving the name of the hospital, the number of beds, and of gentlemen, if possible, who would be familiar with the institution, one from the medical management, and one from the civilian management of the institution, so that they could have on file in the War Office the number of patients cared for by the profession of the State of Kentucky, and in pursuance of that which would be carried out later as outlined in the plan for work. This plan is as follows:

Through the cooperation of the Federal Government and a joint committee representing five great national medical associations, namely, the American Medical Association, the American Surgical Association, the Congress of American Physicians and Surgeons, the Clinical Congress of Surgeons of North America, and the American College of Surgeons, plans have been carefully formulated and matured for the purpose of ascertaining, organizing and utilizing our vast civilian medical resources in accord with the comprehensive plans for national defense which are now being carried out in all lines of endeavor.

The first duties which the Committee of American Physicians for Medical Preparedness specifically undertake are:

1. To aid the Medical Department of the United States Army and Navy by making a comprehensive inventory of the special qualifications of individual civilian physicians throughout the country.

2. To cooperate with the National Committee of the American Red Cross in bringing that organization up to the highest standards of medical ideals and to aid in the organization of Red Cross units throughout the country.

3. The activities of the near future will include a very practical inventory of all civilian medical resources.

4. Research work and careful investigation along many lines relating to the subject of efficient medical preparedness, etc.

The organization of the Committee of American Physicians for Medical Preparedness consists of a National Committee composed of: Six ex-officio members; thirty members who are appointed by the joint action of the Presidents of the American Medical Association, the American Surgical Association, the Congress of American Physicians and Sur-

geons, the Clinical Congress of Surgeons of North America, and the American College of Surgeons; and a number of associate members of the National Committee representing important subjects closely allied to medicine.

State committees of nine members for each state, three members for the territories (appointed by the National Committee) and a number of aides for local work, to be appointed by the several state committees.

The personnel of the National Committee as now constituted is as follows:

Honorary Members—William C. Gorgas, Surgeon General, United States Army; William C. Braisted, Surgeon General United States Army; Rupert Blue, Surgeon General, Marine Hospital Service.

Ex-Officio Members—Rupert Blue, President of the American Medical Association; Jefferson R. Keen, Colonel Medical Corps, U. S. A., Director General Military Relief American Red Cross; Samuel J. Mixter, President American Surgical Association.

Members—William S. Thayer, President, Congress of American Physicians and Surgeons; Fred B. Lund, President, Clinical Congress of Surgeons of North America; J. M. T. Finney, President, American College of Surgeons; Frank Billings, Chicago, Illinois; John F. Binney, Kansas City, Mo.; Joseph Bloodgood, Baltimore, Md.; George Emerson Brewer, New York, N. Y.; George W. Crile, Cleveland, O.; George De Schweinitz, Philadelphia, Pa.; Charles Gibson, New York, N. Y.; Robert G. LeConte, Philadelphia, Pa.; Fred Bates Lund, Boston, Mass.; Edwin Martin, Philadelphia, Pa.; Franklin H. Martin, Chicago, Ill.; Rudolph Matas, New Orleans, La.; Charles H. Mayo, Rochester, Minn.; William J. Mayo, Rochester, Minn.; John B. Murphy, Chicago, Ill.; Lewis S. McMurtry, Louisville, Ky.; Robert E. Noble, Major Medical Corps, U. S. Army, Washington, D. C.; Albert J. Ochsner, Chicago, Ill.; Charles Allen Porter, Boston, Mass.; Charles A. L. Reed, Cincinnati, Ohio; Emmet Rixford, San Francisco, Cal.; Hubert A. Royster, Raleigh, N. C.; Henry Sewall, Denver, Colo.; Frank F. Simpson, Pittsburg, Pa.; Richard P. Strong, Boston, Mass.; Albert Vander Veer, Albany, New York; Victor C. Vaughan, Ann Arbor, Mich.

Associate Members—J. F. Anderson, ex-officio, President, American Public Health Association; Winford H. Smith, ex-officio, President American Hospital Association; Thomas L. Gilmer, ex-officio, Dean Dental Department, Northwestern University; Edward C. Kirk, ex-officio, Dean Dental Department, University of Pennsylvania; Eugene Smith, ex-officio, Dean Dental Department, Harvard University.

A.—Inventory of Medical Men.

It is the desire of the Surgeon General of the Army to greatly increase the number of medical men in the Officers Reserve Corps. To further that end, the Committee of American Physicians for Medical Preparedness will endeavor to interest the medical profession in that subject, and in the desirability of applying for commissions in the Officers Reserve Corps, Medical Department.

B.—To Aid the American Red Cross.

By a mutual understanding between the National Committee of American Physicians for Medical Preparedness and the National Committee of the American Red Cross, and by an interlocking arrangement of National, State and Local Committees, the former organization has determined to cooperate with the Red Cross in raising its civilian and military work to the highest point of efficiency and in organizing a considerable number of Red Cross Hospital units in strict accord with the most recent advances and the highest ideals of medicine. By a Presidential proclamation dated August 22, 1911, the Red Cross was made, substantially, an agency for the organization of a reserve for the medical services of the Army and Navy, and the units organized by it pass, in time of war, into the Medical Service of the Military Forces.

THE PRESIDENT: Are there any remarks on the report of this Committee?

J. GARLAND SHERRILL: I suppose a great many of you have received letters from the War Department asking for volunteers.

THE SECRETARY: There are some of these things that I come in contact with in a way that makes it possible for me to start a discussion which I know will be profitable to the Association.

The most important thing about medical preparedness that we are totally unprepared for in this country is to take care of the sick people of the country in time of peace. We are wholly unprepared to take care of the majority of folks that get sick in Kentucky. They never see a doctor or a nurse or go to any institution that will give them any real benefit in making them efficient citizens. We all realize that the problem of health is entirely different from what it was a few years ago. A healthy man is now considered such a man as can do his work efficiently, and if he cannot do his job, if he is not healthy enough to do his job, he is not a well man. He needs medical advice. He needs to be put back on the track of right living until he becomes a well man and can do his job. That is the thing that is standing conspicuously before us in the profession of Kentucky.

I wish every doctor in the State, every thoughtful citizen could have been with me at

Fort Thomas during the recent examination of the Kentucky troops. I was assigned very early by the War Department to assist in making physical examinations of these men. This gave me an opportunity to listen to hearts, and I listened to more heart throbs than I had known this nation ever had before. I listened to the hearts of 4,200 stripped American soldiers. I am much more expert in listening to hearts now than I was before, and I am grateful to my country for having given me that opportunity to study the condition of the hearts of these men. Of the 4,200 men brought up there for examination, 1,800 were found so defective that they would have been on the pension list before their names got on the Army roll. (Laughter.) They were misfits, but they were the best we had. The men were picked from the flock before they were sent us. This presents to every thoughtful citizen a tremendous proposition—1800 out of 4200 young men, practically all of them under thirty years of age, a large majority of them under twenty-five years of age, were under-weight, under-sized, under-fed and under-developed. Among them were 41 cases of acute trachoma, and more than 50 cases of acute tuberculosis. Some 75 had heart disease; more than 100 of these young men had defective hearts, many through the excessive use of tobacco—the riffraff of Hopkinsville, Owensboro, and other cities where we have saloons, and they were ruined in the making before they had a chance to become citizens and as unfit for citizens as they were for soldiers. At least 1500 of the 1800 rejected are not fit to be citizens. This sort of thing we have to contend with until we impress the people with the fact that things have got to be done over again. We have got to start at the beginning. We have got to start to educate people how to make men and women out of babies before the babies are born if we expect to accomplish anything in this crusade. In addition to that, we have to take this problem to the home because as tax-paying citizens of the State we have got to go into the schools. Every thoughtful citizen should find out what is going on in the school. When you and I went to school they did not teach us anything of value in the practice of medicine, the practice of law, or carpentry; they taught things which enabled you and I to reason a little bit about various things and when we think that a student in a Kentucky school to-day goes through eight years of common school work, four years of high school, and the State University four years, and then goes to a great university to complete his course and get a degree, it is frightful to contemplate. They might teach him how to become a cultist or faddist, but they will not teach him how to get rid of tubereu-

losis in his family unless he takes a special course. When you stop to think that the vital statistics of Kentucky in the last six years show approximately that of each five babies born in this State, 1 dies in infancy, meaning between infancy and school age, one dies during school age, one dies after leaving school but before entering upon their life work, and, of the other two, one hardly goes to school, it shows the sort of system of education we have built in the State of Kentucky, and much of it is wasted before it is started, and a large number of healthy boys and girls are dying with typhoid fever and consumption, and other wholly preventable diseases, in their early manhood and womanhood.

Our preparedness must start at the foundation and help to build up such an organization, so that when war comes, when pestilence comes we will be in a better position to cope with these problems than we have been heretofore. The thing for us to do is to go to work in our county societies and exert such influence over the profession as will enable us to build medical centers that will prevent the diseases that are sapping our vitality.

Our people are not as good physically as they were fifty years ago. They are living longer because they are getting less chance for acute infection, but there are not as many passing on the examinations as there were sixty years ago. The thing for us to do is to thoughtfully, constructively build so that we can get rid of the unfit by not having them, then we can extend life, and while we are extending life we can make the units more useful. There is very little in the custodial idea of the poor and afflicted that appeals to me, but to take the poor and afflicted, the worthless and unfit, and make out of them real human beings who can do something is a hard job, but it is nevertheless one of the jobs that confronts us.

As Miss Hunt has pointed out, I believe it is a great mistake for Kentucky to send too much money to foreign missions to try to civilize the Chinaman or Hindu when we have got as many heathens as we have in our own State. The thing to do is for us to do some of this work ourselves. Money does not amount to much. There is plenty of it all over. What we need in Kentucky is work.

THE PRESIDENT: If there is no further discussion, we will proceed with the regular order.

J. GARLAND SHERRILL: There is nothing further I have to say except that we ask the cooperation of the entire profession in this matter. There will be sent out letters asking the cooperation of the profession with the Red Cross Relief Corps, and there has been requested the formation of field aids, not di-

rectly connected with the Army, but aids in cases of disease.

THE PRESIDENT: That completes the program for the evening unless there is something under the head of miscellaneous business.

On motion, the House of Delegates adjourned until 8 A. M. Wednesday.

OCTOBER 25, 1916.—THIRD MEETING OF THE HOUSE OF DELEGATES.

The House of Delegates met at 8 A. M., and was called to order by the President.

BALLARD COUNTY MEDICAL SOCIETY.

W. A. ASHBROOK, LaCenter: We have no secretary right now, and have not had for the last three or four months. We have been meeting regularly. We have eighteen physicians in the county, sixteen of whom belong to the county medical society. The other two doctors who are eligible are old and have quit taking an active part in the meetings. We meet every second Tuesday in each month.

THE PRESIDENT: Report of Committee on Insurance, C. W. Aitkin, Chairman.

THE SECRETARY: In regard to insurance work, it necessarily is taken up in conjunction with the report of the next committee on the Compensation of Physicians, and unfortunately Dr. Rodman is not here to make the report for that committee. There are two propositions which have to be considered together. Several of the large insurance companies are again proposing to reduce the fee to \$3. The medical profession of Kentucky is the most underpaid set of laborers of the State. Railroad engineers make a good deal more money than doctors do; they have much larger incomes. There is hardly any class of skilled labor, day labor, for which the income is not greater.

I noted yesterday the presence of three sons of prominent physicians as delegates at this meeting. That is not only a noteworthy fact because of the character of the fathers of these young men, but it is even more noteworthy because of the last generation of doctors in Kentucky, nearly four thousand of them, there are so few that have sons in the profession who are in a position to come here. If you look into your county, and almost every county, you can see the sons of men who formerly were prominent physicians, who are now, because of lack of early educational training, because their fathers were not financially able to give it to them, deprived of that standing their fathers had.

Mr. President, I note the presence in this hall of the Secretary of the Indiana State Medical Society, Dr. Coombs, and I move that he be made a guest of the Association and be invited to take part in our discussions and de-

liberations. I am sure that I express the joy of the members that we have with us one of the most efficient secretaries in the United States. (Applause.)

Seconded and carried.

DR. COOMBS: I wish to thank you for this cordial greeting, and I wish to return the greetings from Indiana. I have long had great admiration for this Society, and all the more so since I came to know your Secretary, Dr. McCormack. I read your JOURNAL as regularly as any of you do and keep track of your activities, and we have sense enough to copy many of the ideas you bring to these meetings, and we find them very effective in Indiana.

I am here to pay back a visit that Dr. McCormack made years ago to our state meeting, and which we appreciate very much.

THE SECRETARY (resuming): One of the most important functions of the Kentucky State Medical Association is to guard the material interests of the physician. We have been making a careful investigation recently, and I am confident that there are very few physicians in Kentucky who are collecting and putting to their credit in banks as much as \$100 a month. The successful men do not believe that; the man who does not keep books does not believe it. Of course, there are a great many men who are not worth a hundred dollars a month and never will be, and they are not going to be paid any more than that or any more than they are worth. I do not believe in a fee bill that all doctors should be paid the same amount because there are some good ones and some bad ones. My experience is that you cannot get a good cloak for a cheap price, and not get stuck. If you send for a doctor who is not competent, you get what you pay for. The thing we want to do, is, of course, to elevate the standard of the medical profession so that its members will be worth more. There are a great many men whose medical examinations for insurance companies are worth more than three dollars. I do not think the insurance companies pay too little for any man who makes a three dollar insurance examination, because the man who is willing to notoriously and openly charge less than the minimum fee bill fixed by his profession shows that there is something wrong with him. There is bound to be something wrong with the examination. He admits that his examination is worth less than the charge he can honestly get and receive. The same thing applies all the way along the line of the men engaged in general practice. This problem does not affect me at all. In Warren county the doctors are getting the same income per call or per case or per piece of work as they did fifty years ago. There has been no increase in the compensation for their

work in any way; the only difference is they do not collect as much as they did fifty years ago, because the average individual cannot pay his bills as well as he did then. It seems to me, that this matter of compensation of the profession or its income is one of such importance that I know Dr. Rodman had it in mind to move that a committee of five to be known as the Committee on Compensation of Physicians should be constituted, who shall report to the next meeting of this Association the study of professional incomes, and the ways and means of professional support, particularly in view of the increased complexity of the practice of medicine. Our expenses have increased and our income has not increased in proportion. It seems to me, it is fitting that this Society should appoint a strong business committee of its best members to consider this question, to investigate it, to investigate the formation of community centers and work out whatever plan that seems best. There is no question but that we can learn from many other sources than ourselves. We do not study as much as we should the material things that are essential for the proper support of the members of the profession. In our societies we are apt to gloss them over and not think about them enough. The successful men in the profession are naturally preparing for themselves in such a way as not only to be able to maintain themselves, but are accumulating some means, and we are letting the bulk of the profession drift along badly supported and badly maintained. This is one of the very greatest problems that needs our careful study and attention, and I would like to move that the President appoint a committee of five on the Compensation of Physicians, who shall study the whole question with a view of receiving adequate compensation for adequate work.

W. B. McCLURE: I second the motion.

W. L. HEIZER: I think with the proper men appointed on that committee much good work could be done, and they will be glad to receive suggestions.

Recently, while in San Antonio, Texas, I was sitting in the office of Armour and Company when I saw a credit slip made out by the chief clerk and handed over to another clerk. This credit slip was directed to a protective agency and I learned from the cashier of Armour and Company that any man who failed to pay his bills after a certain definite time was debarred from further credit not only by Armour and Company and all of its branches, but by every member of the credit association. The idea struck me at the time that there ought to be some sort of means devised to protect the doctors against the dead-beat, against the man who persistently refused to pay his bills and who seeks the services

of some other doctor to avoid paying his bills. It seems to me, some sort of auxiliary body, incorporated if you wish, should be organized and from this central state body there should be devised certain means by means of which the dead-beats can be eliminated from having treatment given to them gratis, and also a method worked out by means of which the bills that are owing to various physicians can be successfully collected. This would not work hardship on those who are poorly paid or on those for whom charity work is done, but it has reference particularly to those who do not pay. I offer these suggestions in support of this measure.

I. A. SHIRLEY: I would like to speak of the condition in my own section and immediate county. I would like to see some means devised whereby we can put a stop to those doctors who sign an obligation to charge a certain price and then violate it. Only a few years ago, as we could not arrange a fee bill under our Constitution and By-Laws, we had a fee bill arranged by an independent organization. Some of our best young men were on that committee. We arranged a fee bill to which each man signed his name, and had it published in the city papers, costing about forty-two dollars, so that everybody understood it. Thirty days had not elapsed before I heard of one practitioner who, instead of practicing two dollars a visit, said he would visit patients for one dollar. In other words, where others would charge fifteen dollars, he would charge ten. This is an unusual state of affairs. Two or three of the best men in our own town are men who do the largest practice. This man who violated the agreement, instead of charging two dollars for each visit, would go for one dollar, day and night. I am satisfied some of the men who signed this schedule did so for the purpose of violating it. Let us make a standard and live up to it.

W. L. HEIZER: That is the purpose of having a committee.

J. W. STONE: There is another side to this question about which nothing has been said which might be looked into. It is well to protect the physician, but we ought to be doing something for the men who employ us. There are three or four thousand members of lodges in my town and every one of these lodges requires an urinalysis in connection with examinations. I venture to say, there is not one in ten of these members that has ever been asked for specimens of urine for analysis. The urinalysis goes to the medical director and comes back. As an illustration of how imperfect this system of urinalysis is, I will say that one young lady, who drew a three thousand dollar policy, a year before had been operated on twice for tubercular trouble. Another one I knew, who had had epi-

lepsy practically all her life, drew a policy for two thousand dollars. Another one who had epilepsy drew a policy for one thousand dollars.

These things are going on all the time, and those who employ us have a right to call on us to protect them as we have to protect ourselves. I guarantee there is not one in ten of these lodges that asks for a specimen of urine and gets it for the purpose of analysis before the applicant for insurance is passed. The committee should look into these things.

Motion carried.

THE PRESIDENT: Is there any further discussion on this question. It is a very vital topic. I will defer the appointment of this committee until some future time.

The next committee to report is the Committee on Legislation and Public Policy.

THE SECRETARY: The committee should report and Dr. Aud was expected here. In the absence of any member of the committee, I will say that at the last session of the legislature the most important piece of health legislation was passed that has been passed in Kentucky, but it has not yet become a part of the armamentarium of the local boards of health; that is, an amendment to the Food and Drugs Act providing for the immediate quarantine and seizure of any article of food or drug that is adulterated. Any county board of health or city board of health, when they find any meat, milk, or any other thing that is unfit for human consumption, because produced in an unsanitary place, immediately order its quarantine at the place where it is. It cannot be sold, it cannot be moved, nothing can be done to it, and the health officer immediately proceeds before a magistrate or the county or police judge to have a hearing on the subject and if the stuff is bad at the time it is condemned, there is no danger of it being sold. There is not much chance of any individual getting the stuff back into commerce unless protected in some way.

The next piece of legislation that will be of great importance ultimately on account of the public sentiment we will be able to build up so as to make it effective, is what is known as the true ad bill, an advertising law which provides that any false statements of any matter advertised in any way shall be a misdemeanor and punished by fine and imprisonment. As soon as the law is tested out in proprietary things, it means the end of the patent medicine business, because as soon as they stop lying they stop selling. There is no chance of selling any patent medicine and telling the truth about it. That law will be more effective in that respect than any other statute that can possibly be made. Those two pieces of legislation are on the statute books and the bill

providing for reducing the time in which malpractice suits can be brought from five years to one year was passed by the efforts of the Committee at the last session of the legislature.

At the next session it is proposed to devote the entire energy of this Association with its allies, the State Association of Charities and Correction, the Nurses State Association, and similar organizations having one general purpose in view, to putting through the whole time health officers' bill with the view of having such an effective organization as will enable us to reach the class of people furnishing most of our preventable sickness and death. It is with this idea we want to tell you of the campaign to that end. It is hoped as many doctors as possible will be members of the next session of the legislature. You will remember that in 1910, when the only progress was made that has been made in State Board of Health legislation in many years, there were twelve doctors in the legislature. They were all high grade, effective men, about half of them Democrats and half Republicans, but nobody knew they were anything but doctors when they got there. They cast their twelve votes together on any proposition. They were absolutely one man on every proposition that came up for legislation which would benefit the people. If we had such men in the legislature who could vote together on these propositions we could move Frankfort to Hopkinsville at any session of the legislature. They hold the balance of power on legislation. With such devout men there, who are going to be on the right side of every proposition and going to make their influence felt, any legislation is possible for the profession and the people. At this time particularly high grade physicians are needed in the legislature very badly because the problems that confront the State are the same problems that confront us. They are poverty and lack of income, and I do not know of any class of men who need to have this situation cleared up more than the doctors of the State. We have been running under the same disability the State has for a much longer time than it has and it is not any worse in debt than we are. If we cannot solve the problem, it cannot be solved. If at this time we are careful we can get effective doctors in the House and Senate and do great good. It is very important that when you send doctors they are not to be sent simply because they are doctors. At one session of the legislature when we had six doctors in the House and Senate, neither one of them was a real doctor. They were afraid to go back home and tell the people that they had gone to Frankfort and voted in favor of any measure that advanced public health interests or any other interests; they were

against everything that came up and told the people how they had opposed practically everything suggested that was progressive. With that kind of men in the legislature we are worse off. Miss Hunt made an excellent suggestion when she said that the important thing to do is to educate legislators before they go to Frankfort. The time to talk to and influence these men is before they are elected members of the legislature. When Republicans and Democrats are running for the same job, or when two or three men are running, a nomination is equivalent to an election in any county, and at this time they are malleable. They are ready to receive new impulses, new lines of thought, and that is the time to talk to them about such legislation as this. If that can be done in an effective way in which it is done in some counties, much can be accomplished. Whenever anything happens in a certain county, it happens right. They have the wisdom to look into the thing early before there is any action, and if that can be done in every county we would have no difficulty about it. If all counties were like Campbell-Kenton, or Jefferson county, where there has not been a vote against progressive health legislation, and never will be because they have effective organization, much more good can be accomplished than is being achieved at the present time. If you were to call the roll of societies and listen to their reports, you would find that there is not a single county in Kentucky that has a good organization but what will report that the legislators have voted for progressive legislation. It is the poorly organized counties that do not respect themselves that send representatives to Frankfort who are inactive when they get there, and that will continue as long as such conditions exist. As we go back home we should strive for effective organization in counties and devote our personal energies to the campaign for nominations and elections of senators and representatives, and if we do this we could accomplish wonders.

In each county now we have local registrars of vital statistics who are, as a rule, the leading citizens of the various sections they represent. We have the teachers' associations, we have the women's clubs, we have the public health nurse associations where they exist, and we have got a lot of coordinate organizations that are represented by active workers ready to do things. As soon as we can have an all-time health officer in each county our success is already won. I am perfectly well satisfied that we can cut the death rate in Kentucky in two. From the splendid vital statistics report, we know enough about diseases from which people are dying to know that there are many preventable diseases that we can surely and absolutely reduce if we can

get somebody to go and remove the cause and stop the disease. With that idea in view, I feel that I am trespassing somewhat on the work of the committee, and still in the absence of its members I believe I am saying what they would say if they were present. We want to ask every member to take a personal interest in the next session of the legislature.

THE PRESIDENT: We will now listen to a report from Councilor of the Ninth District.

REPORT OF COUNCILOR OF THE NINTH DISTRICT.

A. S. BRADY, Greenup: I am not ready to make a written report of our District. I have written the different secretaries of my district for reports and have failed to get a single one, but I am pretty well versed in the condition of affairs in our District.

I find the worse condition we have to contend with in our District is the scattered residences of physicians, and there is no concentration in any of the counties, you might say, except Boyd. The physicians live all over the county, and it has been uphill business all the way through to get the men interested in the society and get them into the society and get them to work. I visited several counties and that is the excuse from all of them. I have visited their meetings when they would have something like ten or fifteen physicians in their county, probably three or four of them in the county seat, and the rest of them scattered over the county in the extreme parts, and on account of rough roads, long distances, they failed to attend. But with all that, we have a good bunch of doctors in the eastern part of the State, who are active in their praises for the State Association, but not very active when it comes to working in their local societies.

We have a good working society now in Lawrence county, and these doctors are scattered all over the mountains, twenty-five and more miles away, yet they attend, and they are as fine a bunch of physicians as I have met in my life, active and energetic.

Lewis county is in about the same condition. I organized a county society in Lewis personally and its members are working nicely. Carter county has a good active membership. They attend meetings regularly; and Greenup, my own county, has a bunch of active physicians, that is, speaking of the faithful few. The men we have in the organization attend regularly and respond promptly and give us good papers. We have four men outside of the organization in the county, and we have tried in every way to get them into the society, but they do not come in. One of them is a fellow who rides a mule, sticks his trousers in his boots, and goes seven or eight miles in the country for two dollars, treats a case of diphtheria, and when asked what the child has and what it died from, he shakes

his head and says, "Well, it was something." (Laughter.) We have men like that who are licensed to practice medicine in the State of Kentucky. The other three men are pretty much of the same caliber. We have tried to get them into the society to make better men out of them, but we cannot do it.

The Pikeville Society is in a flourishing condition. We have no organization in Martin because of the lack in the number of physicians. I have tried to get them to come into adjoining county societies and the doctors have promised to do so but so far they have not done it. They have asked if they could go to some adjoining county, and I think they should be allowed that privilege. I have told them that they ought to subscribe for the State JOURNAL anyway, and probably they take it.

So far as the work of the Council is concerned, I am free to admit that it is poorly done. The mode of travel in that mountain country is so crude that it is a difficult task to visit these doctors. It is impossible to get to some of them unless you go on horse-back, and I quit that some ten years ago. But I want to say to the House of Delegates that I have determined to go into the field next year and endeavor to perfect a better organization than we have at present. We have laid the groundwork for a better condition of affairs, and if personal effort will count for anything. I will promise the Association that it shall be better done than it has been done in the past two years. (Applause.)

THE PRESIDENT: We will now have a report from the Committee on Resolutions on the death of Dr. Vance.

Dr. Henderson presented the following resolution:

The Kentucky State Medical Association desires to express its deep loss and lasting regret over the loss of its President-Elect, Dr. Ap. Morgan Vance, whose death occurred on December 9, 1915. Dr. Vance was the type of man upon whom one could depend at all times—a positive character, and one commanding respect and affection. His work made a lasting impression upon the medical and surgical thought of the day. His memory will long be cherished by the members of the Association.

THE PRESIDENT: It is unnecessary to have a motion to act on this resolution. The report will be accepted as read.

LOUIS FRANK: Before the House of Delegates adjourns, I want to say I see no provision on the program for any miscellaneous business, and under this head I want to make a motion and to call attention to one or two things, if I may have the opportunity, before we adjourn.

In going over the Constitution and By-Laws of the Association, it strikes me there

are a great many things which our Constitution and By-Laws do not provide for. There are quite a number of questionable things which cannot be clearly interpreted. There is iteration in various places, and some things that seem to be contradictory. I think we really should go over these and a committee should be appointed to go over carefully the Constitution and By-Laws which we adopted in 1902, codify them, get them together, and get them uniform and eliminate these questionable things—at least, those things upon which there might be some discussion, make them clear, and provide for certain conditions which have arisen from various actions in the society for which there is no provision at all at present. We are a corporate body under the laws of the State and as such our acts must, of course, be carried out in that regard. There are some things which might at some time be open to question if we are permitted to act and operate under the Constitution and By-Laws. There are a number of features susceptible to various interpretations.

I would therefore move that a committee of five be appointed, of which the Secretary shall be a member, to go over our Constitution and By-Laws, to make such changes as are deemed best under our present workings and with the knowledge we have, and that this motion is considered offered in writing as an amendment so that it can be acted upon at the meeting next year. I believe we can do that with unanimous consent. This will clear up a number of features which it is unnecessary for me to call your attention to.

We have a councilor appointed from our district which does not lie within the domain of the council to elect because there is no vacancy. Dr. Hibbitt, our regular Councilor is away, and there is no actual vacancy, and it is questionable whether such a procedure is lawful or not.

THE PRESIDENT: The Council recommended filling the vacancy in Dr. Hibbitt's absence; it did not elect a Councilor but elected an acting-councilor.

LOUIS FRANK: But there is no provision for such a thing.

THE PRESIDENT: We felt that the District should not be unrepresented. Dr. Hibbitt has been a very efficient Councilor and it is our wish that he shall continue in the place, but in his absence, and as a solution of the difficulty, the Council elected an acting-councilor.

LOUIS FRANK: This is not a complaint, but simply an example.

THE PRESIDENT: I am very glad Dr. Frank has made this motion as action will be taken by the standing committee on the Constitution and By-Laws and such additions or changes will be made as will specifically or

clearly put the Constitution and By-Laws in better shape. Does the motion meet with a second.

J. GARLAND SHERRILL: I second the motion. (Carried.)

THE PRESIDENT: This committee will be appointed, and, of course, their report, so far as the By-Laws are concerned, will be made at the next meeting next year, and can be acted upon by lying over one day. Amendments to the Constitution have to go over a year.

LOUIS FRANK: Could we not by unanimous consent act upon these at the next meeting?

THE SECRETARY: Dr. Reed ruled on the re-organization of the American Medical Association, that the appointment of a committee for the purpose of revision of the Constitution and By-Laws was sufficient notice that an amendment had been offered, provided it was published in advance of the meeting, so that the profession could have access to it.

THE PRESIDENT: That is very wise and sensible.

If there is nothing further in the way of miscellaneous business to come before the House of Delegates the Chair will entertain a motion to adjourn.

It was moved that the House of Delegates do now adjourn until 8:00 A. M. Thursday.

Seconded and carried.

The House of Delegates thereupon adjourned.

THURSDAY, OCTOBER 26.—FOURTH MEETING OF THE HOUSE OF DELEGATES.

The House of Delegates met at 8:00 A. M., and was called to order by W. Z. Jackson, who acted as Chairman *pro tem*.

THE SECRETARY: I would like to move that the Committee on Medical Education be given leave to report. Their report will require no action, but the Committee desires to make a report on the tendency in medical education, particularly in view of the splendid address delivered yesterday by Dr. Stevens of Mayfield. I want to move in that connection that the Secretary be instructed to write a letter to the Secretary of each county society and ask him to call the attention of every member in the county to Dr. Stevens' address.

Dr. Bloodgood, who has been paying special attention to the question of state medicine for many years, said that this address was the most complete analysis of the situation that confronts the medical profession that he has yet listened to. When we think—and we are bound to think about this thing—that the United States is the only country in the world where medicine has not been socialized, where

it has not become a state function to a greater or less degree, and it is the only country in the world where the individual doctor is taking care of all paupers that get sick in all of the communities, and where the state makes practically no contribution for the care of the sick paupers, it is an anomaly, and it is a thing that is going to be stopped in Kentucky. We have very extensive machinery for taking care of paupers, but all we do is to spend the money; we do not give them the care we should. We pay considerable money for taking care of the sick poor, but we do not take care of them. They are forgotten, and that is the reason Miss Neville has been a ministering angel over the State because the State has not done its duty by the blind people. It is up to us to study the methods that have been effective in the Old World, and see if we cannot guide the thing so that when it comes it will find us prepared, and we will develop a system that will take care of the sick in a way to dignify the profession, as has been done in England in spite of the profession, or whether we will become the merest sort of subaltern of the labor unions as in Germany, where the profession has lost much of its caste and dignity. Those are two lines of endeavor which confront the profession in Kentucky. We have never lagged, and the thing for us to do is to look forward and work out our own salvation along lines that will enable us to treat the sick people of the State as they should be treated and compel the State to care for those who are unable to care for themselves to make them effective and efficient, and in that way make the greatest contribution to the State. We talk about Kentucky being in debt to the extent of 5,000,000 paltry dollars, that is not the thing that overhangs us like a dark cloud, although it is a terrible thing for the man who thinks of the future of our beloved commonwealth, but the great debt Kentucky has is its inefficient, half-baked, unfortunate men and women, and the coming generation of boys and girls who are like blank cartridges, all they can do is to make a noise and do not hit anywhere. The great debt that confronts us and which we owe to the State is in making the ineffective effective, and it is with that idea in view that I move that the Committee on Medical Education be permitted to file its report so that it can receive the consideration of the profession of the State.

Seconded by Dr. Frazer and carried.

THE SECRETARY: I now move that the Secretary be instructed to write the secretary of each county society to call the attention personally of every member of the profession in his county to the address of Dr. Stevens delivered yesterday with the idea that it may be studied and the profession may thoughtfully

receive the message he delivered, which is the future of medicine in the United States.

Seconded and carried.

The reports of the Committee on Expert Testimony, Preventable Diseases of the Eye, County Societies, and Constitution and By-Laws were called for and passed.

REPORT OF THE COMMITTEE ON PUBLIC HEALTH AND SANITATION.

THE SECRETARY: Under the head of the Committee on Public Health and Sanitation, the committee desires to suggest that the State Board of Health and the State Registrar of Vital Statistics be requested to inaugurate as soon as possible a simple and easy system of morbidity reports for the preventable diseases. Dr. Heizer, with his usual ingenuity and thoughtful care of the profession of the State, who for many years was an ornament as a general practitioner, has devised an extremely simple plan by which the reports can be made without being a burden to the doctor. He can carry report blanks which will be furnished by the central office, and they can be made out as easily as daily charges are made, and without any difficulty. The necessity for this has been growing rapidly as the health department has been developing.

In Mercer county, where Dr. Forsythe has been active in health work, during the first six months of this year they had sixty-three cases of typhoid fever without a death, so that vital statistics gave no indication in that county of the burden of typhoid fever, and that has been true in many counties, the death rate from typhoid fever, instead of being one in fifteen or sixteen, as it was ten or twenty years ago, when I was in the active practice of general medicine, has been reduced greatly; but the economic burden has not been reduced in proportion, and with the idea of finding this morbidity reports have been started in more than half of the cities, and it was with this idea in view that we desired to begin that work in Kentucky and extend it as rapidly as we could and with as little burden as we could to the general practitioner.

In discussing that suggestion of the committee, I want to talk to you for a moment about an idea that has become prevalent and that you heard hinted in veiled sentences, then spoken out in open, in regard to the development of health work in preventable diseases. It is constantly said with iteration and reiteration in an insinuating sort of way that because the diseases with which we are most familiar—filth diseases and preventable diseases—are going to be prevented in the near future, the practicing physician will have nothing to do and there is not going to be need of doctors in the future. That is all balder-

dash, a pure figment of the imagination of a class of physicians who have done nothing but treat these controllable diseases. The profession has been burdened and degraded as much as you possibly have been burdened by this class of diseases. It does not require anything like the skill to treat typhoid fever that it does to prevent it. It does not require as much judgment to treat a case of diphtheria as it does to prevent people from having it. If we will use the highest form of sense we will prevent these things, then we will begin to practice medicine, because the great problem of medicine as to communicable diseases is their prevention and the next problem will be to decide what diseases are amenable to treatment and then have to diagnose and treat them. We rarely treat people who have nephritis or Bright's disease, or heart disease, with as much judgment as we do typhoid fever. Typhoid fever requires active treatment and so does heart disease require just as much judgment. We have not been giving these problems our attention because we have been so busy pondering over the filth diseases we have not had time to look into the future of the profession and how to elevate it to a dignified position. The remuneration of doctors in the future will be better because we will do far better work.

Last night's address by Dr. Bloodgood will mean for the doctors in their immediate communities five thousand dollars, looking at it from the lowest plane of commercialism. That is the least and most sordid plane from which you can look at it. Sixteen doctors came to him last night with active precancerous states in various organs. If that many doctors came to him, you can imagine how many laymen there are who are affected. I do not think the doctor is less intelligent than the layman. It looks as though the doctors ought to be fully as intelligent as the average layman, but the idea that has been circulated amongst the profession is that because we will get rid of typhoid fever in a few years and diphtheria, there will be nothing for us to do. We have the highest death rate in the registration area for scarlet fever, but that is not because of lack of knowledge of how to prevent the disease, it is because of lack of education on the part of the people. We see diphtheria cases late. I wish everybody could see the organization they have in Ballard county, where they have no house large enough to hold the people that come from the country around to hear them talk about the germs that confront them in that community: where they have organized the boys and girls into health leagues and follow the leadership of Miss Yancey in Mason county where she has organized a health department which has the privilege of arresting any of the students

who violate any of the sanitary regulations and brings them before the teacher as judge. The teacher summons a jury of six children and tries them for violation of the health laws. These children are far ahead of the older folks. They learn more than we learned about health laws, so that you cannot persuade them to violate them. Miss Yancey said a short time ago, when they were having a lesson in arithmetic, a comparatively trivial matter, the lesson had been interrupted by a wise teacher who conducted the trial of a child that was sneezing without putting a handkerchief over its nose, thus scattering the germs of disease. In our day we did not stop proceedings; we did not realize the importance of what we did when we wanted to sneeze, we were not educated to the idea that any man who spreads germs over the room is guilty of a criminal offense. But these children are, and when they act as jurors or go into the legislature or courts they are ready for business. That is the sort of organization we want to-day with the view of dignifying the profession into a greater institution and this Dr. Stevens spoke about in his masterly address yesterday. That is the future to my mind of medicine.

THE PRESIDENT: What will you do with this report?

T. A. FRAZER: I move it be adopted.

Seconded and carried.

THE PRESIDENT: The next report is that of the Committee on Ethics.

This report was presented as follows:

MEDICAL ETHICS.

The *esprit de corps* of the medical profession is due to the observance of medical ethics by the profession.

Medical ethics stands for etiquette and fair dealing among physicians, and the ethical physician does nothing to lower the high standard of the medical profession. It is ethical to charge the established rate fees, and do nothing to deprive another local physician of his patient. An ethical physician, when in doubt as to the malady of the patient, holds a consultation, and does not force the patient to rely on his judgment alone.

A physician who is ethical does not claim he can cure a disease in a specified time, when he knows the case is hopeless.

It is unprofessional for a physician to assist unqualified persons to evade legal restrictions governing the practice of medicine, and physicians should expose without fear or favor, before the proper medical or legal tribunals corrupt or dishonest conduct of members of the profession.

Your Committee in this connection desires to call your especial attention to a violation of these principles of ethics in the employment

by surgeons of nurses and others as anesthetists who are not trained in the practice of medicine. It is urged that this is a procedure under the control of the surgeon, but we submit that neither law nor usage permits surgeons to decide who shall be permitted to practice medicine. In addition, few surgeons are qualified better than others of the profession in the administration of anesthetics. In order therefore, to stop this evil now, your committee recommends that the medical profession of Kentucky request its members not to employ others than qualified physicians as anesthetists except in cases of emergency. In order to make the request urgent and effective, we would suggest that the profession should not refer cases to hospitals where nurses are allowed to give anesthetics, and that hereafter no member who so violates the law and ethics shall be considered in good standing in this Association.

Every physician likes to think that he is ethical, and it lies in the power of each one of us to be so.

A physician should not only strive to stand high in the community, but with his professional associates also.

The majority of physicians are ethical, and the medical profession must continue to draw a wide line between quackery and ethics.

(Signed) C. H. Todd, Chairman, C. W. Holland, W. H. Carr, Committee.

W. L. HEIZER: I move that the report be adopted.

Seconded and carried unanimously.

REPORT OF THE COMMITTEE ON TUBERCULOSIS.

This report was presented as follows by R. H. Porter, Chairman:

The subject of tuberculosis is one which has received a great deal of attention and study, but the problem is one which must necessarily receive more yet before it is successfully solved and to this end the following suggestions are offered:

1. By appeal to and education of every physician in Kentucky, secure perfect co-operation to the point that when he is first called to see a case of tuberculosis that he promptly notify the secretary of the County Board of Health.

2. In those counties in which there is a wholetime health officer, that upon notice of the secretary to the board of health, it becomes his duty to promptly call upon the patient and outline the precaution and safeguard necessary to protect the other members of the family, and to repeat his visit at intervals to see that the measures he has advised are properly carried out. In counties which have no whole time health officer, let it be the duty of the secretary of the County Board of Health to perform these duties and be compensated therefor by the county in which he resides.

It is the consensus of opinion that our measures and efforts are only half successful from the fact that children and young adults are constantly exposed to tuberculosis in the homes through either ignorance or carelessness.

It was moved that the report be adopted.

Seconded and carried.

THE PRESIDENT: Report of the Committee on Division of Fees.

THE SECRETARY: Dr. Gilbert, Chairman of the Committee calls attention to the enactment of a law which provides for the revocation of any physician's certificate who is guilty of division of fees. That is a very important matter so far as the profession is concerned, and it is not only a violation of the Constitution and By-Laws of the State Association, but it is a violation of the law of the State to divide fees, and any physician guilty of division of fees may have his license revoked. It is far more important than we think of it because division of fees is not only an evil, looking at it from a moral standpoint, but far more than that looking at it from a commercial standpoint, because a doctor who is paid a small part of the surgeon's fee for referring a patient to him is compensated more than he is worth if he did not do anything for the patient, and if he did do anything for him he did not pay near enough. The doctor who made the diagnosis, I think, is as much entitled to remuneration as the man who does the mechanical work of the operation. The doctor who is really worth while, the man who treats his patients with any degree of consideration, should be remunerated out of proportion to that he now receives and will be as soon as this evil is overcome. It has been the custom for a doctor to say to his patient, "You can go to Dr. So-and-so, have an operation done, and that is the thing to do. The doctor charges nothing for doing that. If he has not made a diagnosis and sent the patient off like a lottery ticket, he ought not to charge anything; but if he has made a careful diagnosis and has treated the case and sends the patient off to a surgeon to do merely the mechanical work, just exactly as we would employ a nurse, he should charge for it, and as soon as we get that conception in our minds our incomes will be greater and we will have more self-respect.

T. A. FRAZER. I would like to call attention to one Lamphear, of Chicago, St. Louis, and other places, who has got a movement on foot to organize an association for no other apparent purpose than to receive, decoy, and get physicians into this association who will send him and other fellows of his ilk patients and divide the fees.

I had quite a lengthy correspondence with this doctor sometime ago, and I intended to

have it published in the KENTUCKY MEDICAL JOURNAL. He wrote me, telling me how deserving the worthy practitioner was and entitled to one-half the fee of the surgeon, and I took the matter up and had this correspondence with him and kept copies of my letters intending to send them to the JOURNAL for publication, but I in some way got them misplaced. I have not been able to find them. He comes out openly, boldly, and writes long letters to physicians telling them that if they send him a patient for operation and he can get \$100 for it, he will return \$50 of that amount to the practitioner who refers the case to him. That is the character of the man who is trying to organize the medical profession in opposition to the American Medical Association, and there are men in the profession that are good men, men who mean to do the right thing, who are so ignorant that they will go into this thing and extort money from the public, and every physician in Kentucky and in the United States ought to know about these things, ought to consider them, and ought to be ready to combat the idea whenever it is brought before them.

W. L. HEIZER: In this connection I wish to mention an instance given to the State Board of Health authorities of a practitioner in a city in this State. It seems to be the custom of a particular specialist to have runners employed for a consideration to meet incoming trains. These runners were persistent in their efforts to get patients to go to this particular specialist. In one instance reported the person was said to have a diseased condition or injury of the eye, and a runner tried a number of methods to get this particular person who was injured to go to this particular specialist, and the plea was that he could be treated for half the money. The runner, of course, got a fee.

It seems to me, some definite action should be taken by this House of Delegates in regard to that man proven guilty of such reprehensible conduct as that. He should be brought before the State Board of Health to show cause why his license should not be revoked. It ought to be regulated by the action of this Society.

THE PRESIDENT: When Dr. Frazer was talking the chair was just thinking about the application of the law in a case like the one he reported. Our fee splitting law is a new one. It was passed at the last session of the legislature and became effective in the month of June. Here is a case where a man is openly violating that law, but the doctor in the case, the surgeon in the case, lives in another state. I may live in St. Louis, Nashville, Evansville, or in Cincinnati, and yet try to do business in Kentucky. I think it would be well to get an opinion from the attorney-

general of the State, if one is in doubt, to know whether or not such a man would be liable to prosecution under the laws of Kentucky.

THE SECRETARY: Yes, if the trade is made in Kentucky he would be liable to prosecution here.

THE PRESIDENT: This man writes a letter to Dr. Frazer who lives in a town in Kentucky and tells him that if he sends him a patient for operation, if the fee is \$100 he will pay him back \$50.

W. R. MOSS: Suppose this doctor takes a patient to Cincinnati, and there divides the money, where is the trade or deal consummated? It seems to me, it starts in Cincinnati and the trade is made there.

THE PRESIDENT: Some of you are doubtless familiar with an institution over in St. Louis known as the St. Louis Anti-Narcotic Institute, whose representative writes members of the profession offering \$25 for every morphine or liquor patient sent him. He even sends a blank check with his letter. A number of practitioners have received letters from him.

T. A. FRAZER: He sent me one.

THE PRESIDENT: It is purely a matter of business with him.

The following resolution on the death of Dr. Hancock was presented:

Whereas, the all-wise Creator has removed by death our honored President and brother physician, D. O. Hancock, of Henderson,

Resolved, That the Kentucky State Medical Society has lost a faithful member of the city in which he lived, a useful citizen, and the church a faithful member.

Resolved, That these resolutions be spread on our Minutes, published in the JOURNAL, and a copy of them sent to his widow.

(Signed) J. W. Stone, Chairman, T. A. Frazer, W. M. Floyd.

It was moved that the resolutions be adopted.

Seconded and carried.

On motion, the House of Delegates adjourned until 8 A. M., Friday.

OCTOBER 27—FIFTH MEETING OF THE HOUSE OF DELEGATES.

The House of Delegates met at 8 A. M., and was called to order by the President.

The Secretary called the roll and announced a quorum present.

The election of officers being in order nominations for President were called for.

J. T. REDDICK: The First Councilor District has had but two Presidents in about thirty years. The First Councilor District has within its bounds many men who are eminently qualified for the position of president by reason of their work for the Associa-

tion, and it gives me great pleasure this morning to present the name of a man who, perhaps, on account of his modesty, is not as well known to the Association as are many members. We who know him best know that there is no man in Western Kentucky who is more a gentleman, more a doctor, more an enthusiast with regard to the Association than the man I will name. I desire to put in nomination for President, Dr. V. A. Stilley, of Marshall county.

HORACE RIVERS: I desire to place in nomination Dr. P. H. Stewart, of Paducah, for President.

E. A. STEVENS: I second the nomination of Dr. Stewart.

THE PRESIDENT: Are there any further nominations?

It was moved that nominations be closed.

Seconded and carried.

The President appointed as tellers, Drs. Meyers and Frazer.

There were 38 ballots cast of which Dr. Stewart received 22, and Dr. Stilley 16.

THE PRESIDENT: I take great pleasure in announcing the selection of Dr. P. H. Stewart as President-Elect of the Kentucky State Medical Association. (Applause.)

S. J. MYERS: I move that the Chair appoint a committee to inform Dr. Stewart of his election.

Seconded and carried.

THE PRESIDENT: I will appoint Drs. Rivers and Meyers as a committee to look up Dr. Stewart.

We are now ready for nominations for First Vice-President. You are to elect three Vice-Presidents, but one does not have any precedence over the other.

T. A. FRAZER: I want in a few words to place in nomination a gentleman for Vice-President, who is one of our older physicians, a man whom I have known ever since I have known any one, the first physician I ever knew. He has been one of the faithful men in the medical profession. I desire to place in nomination Dr. Ben P. Earle, of Dawson.

It was moved that nominations be closed, and that the Secretary be instructed to cast a single ballot of the House of Delegates for Vice President.

This the Secretary did for Dr. Earle, and he was declared duly elected.

W. R. MOSS: I rise to nominate Dr. Charles Hunt, a man who attends regularly to his duties as a practitioner and as a member of the society. He lives in Hickman county.

THE SECRETARY: I desire to place in nomination for Vice-President, the retiring Councilor of the Ninth District, Dr. A. S. Brady, of Greenup. He is one of the most

effective men in this State and would be an ornament to the organization.

Dr. Cohn seconded the nomination of Dr. Brady.

There were 38 votes cast, of which Dr. Brady received 26, and Dr. Hunt 12.

Dr. Brady was duly declared elected Vice-President.

Dr. McClure nominated for Vice-President, Dr. Gaither, of Hopkinsville.

It was moved that nominations be closed and the Secretary be instructed to cast a ballot for Vice-President, which he did, and Dr. Gaither was declared duly elected.

THE PRESIDENT: You have to elect two delegates to the American Medical Association. Kentucky is entitled to four delegates, and this year the terms of A. T. McCormack and myself have expired. Nominations are now in order for our successors.

Dr. Richmond nominated Dr. A. T. McCormack.

It was moved that nominations be closed, and the President be instructed to cast one ballot of the House of Delegates for Delegate, which he did, and Dr. McCormack was declared duly elected.

THE PRESIDENT: Nominations for Delegate to succeed Dr. Milton Board.

T. A. FRAZER: I desire to place in nomination Dr. Bird, of Campbell-Kenton county.

The Secretary nominated M. E. Alderson, of Logan county.

Dr. Bird withdrew his name in favor of Dr. Alderson.

It was moved that nominations be closed and the Secretary be instructed to cast one ballot for Delegate, which he did, and Dr. Alderson was declared duly elected.

THE PRESIDENT: Nominations for Orator in Medicine.

Dr. Rivers nominated S. J. Meyers, of Louisville, for Orator in Medicine.

It was moved that nominations be closed and the Secretary be instructed to cast one ballot for Dr. Meyers, which he did, and Dr. Meyers was declared duly elected.

THE PRESIDENT: Nominations for Orator in Surgery.

Dr. Cartwright nominated Dr. Fred J. Koontz, of Louisville.

It was moved that nominations be closed and the Secretary be instructed to cast one ballot for Orator in Surgery, which he did, and Dr. Koontz was declared duly elected.

THE PRESIDENT: The election of a Councilor for the Second District to succeed Dr. Graham, Dr. W. W. Richmond nominated Dr. Griffith as Councilor for the Second District.

Dr. Kinnaird stated that Dr. Griffith was elected to fill out the unexpired term of Dr. Cyrus Graham, of Henderson, who had been compelled to leave the State on account of ill

health, and that he had received a letter and telegram from Dr. Griffith, requesting that he should not be elected as Councilor, as he felt that the work should be done by someone else, as he had been so repeatedly honored by the State Association.

Dr. Wells seconded the nomination of Dr. Griffith, and, upon motion, nominations were closed and the Secretary was instructed to cast one ballot, which he did, and the President declared Dr. Griffith duly elected Councilor of the Second District.

THE PRESIDENT: Election of a Councilor for the Third District to succeed Dr. Rau.

Dr. Kincaid nominated J. N. McCormack as Councilor for the Third District.

F. D. Cartwright seconded the nomination and moved that nominations be closed and the Secretary be instructed to cast one ballot, which he did, and Dr. McCormack was declared duly elected.

THE PRESIDENT: Councilor of the Sixth District to succeed Dr. McChord.

Dr. Frazer nominated Dr. R. C. McChord, of Lebanon to succeed himself.

Dr. Heizer seconded the nomination and moved that nominations be closed, and that the Secretary be instructed to cast one ballot, which he did, and Dr. McChord was declared duly elected.

THE SECRETARY: Dr. Kincaid has been placed in nomination by the unanimous consent of everybody in his district, and he will make a good councilor.

Dr. Frazer seconded the nomination, and moved that nominations be closed and the Secretary be instructed to cast one ballot, which he did, and Dr. Kincaid was declared duly elected.

THE PRESIDENT: The selection of a place for holding the next meeting.

Dr. Kincaid nominated as the next place of meeting Ashland.

Dr. Bailey nominated Dawson Springs.

There were 42 votes cast, of which Ashland received 28, Dawson Springs 14.

Ashland was declared to be the choice of the House of Delegates as the next place of meeting.

THE PRESIDENT: I am quite sure, the reason that Ashland was selected was due to the fact of its being in Eastern Kentucky, and the meeting having been held in Western Kentucky. Automatically, year after next the Society will convene in Louisville under our Constitution, so that the Chair will say to the representative from Dawson Springs we feel quite sure that if he will extend the same kindly invitation at the meeting in Louisville next year or two years hence, it will probably be selected.

J. N. BAILEY: I extend a standing invitation.

THE SECRETARY: There are several small accounts for expenses incident to this meeting and expenses of the councilors, and I move that they be allowed as presented. They are all itemized.

A. T. FRAZER: I second the motion. (Carried.)

The following are the bills which were ordered paid:

S. W. Bassett & Co., Buttons	\$196.50
Dr. Milton Board, expenses to Frankfort	72.25
B. P. Eubank, Public Accountant.....	25.00
Chas. W. Hibbitt, Councilor 5th District, expenses	15.50
R. C. McChord, Councilor 6th District expenses	14.20
A. W. Cain, Councilor 7th District, expenses	17.00
J. S. Lock, Councilor 11th District, expenses	17.85
W. B. McClure, Treasurer, expenses ..	26.00
Dr. C. C. Bass, New Orleans, expenses ..	47.50
Dr. W. L. Heizer, expenses in Arranging Exhibit	11.00
Dr. J. N. McCormack, expenses at Somerset	98.00
G. L. Campbell, Treasurer First Christian Church	100.00
American Surety Co., of New York, (Treasurer's Bond)	12.50
Central Press Clipping Service	6.00
Capitol Engraving Company, (Cuts) ..	6.68
Mayme Sullivan, Honorarium and expenses	37.05
Clyde W. Howell, salary and expenses	76.50
Dr. A. T. McCormack, salary and expenses	131.05
S. M. Haskins, wages as janitor for exhibit	6.00
Dr. L. H. South, salary and expenses ..	40.50
Hotel Latham, expenses	43.70
Baugh Electric Company, drop light ..	4.00
Keach Furniture Company, (darkening auditorium)	15.00
Times-Journal Publishing Company, printing JOURNAL, etc	279.00

The Secretary, at the suggestion of a number of members, moved that the gratitude of the Association be expressed to Theo. W. Singer, the very efficient representative of the American Medical Association, who has been residing in Louisville, for the past two years, for his splendid work in arranging for special Pullman accommodations for this meeting, and that the Association express its appreciation for Mr. Singer's excellent organization work throughout the period of his residence in Kentucky. (Carried unanimously).

THE PRESIDENT: At the first meeting of the House of Delegates, just before the meeting adjourned, a motion prevailed which authorized the President to appoint a committee of five, one of whom to be the Secretary, ex-officio, to revise the Constitution and By-Laws. Within a few moments after that motion prevailed, it was changed, so that the duty has devolved upon the present President and acting upon that instruction I will appoint on that committee, J. W. Kincaid, the retiring President; A. T. McCormack, J. C. Moseley, of Henderson; E. L. Henderson, of Louisville, and W. W. Anderson, of Newport.

What is the further pleasure of the Society?

W. B. McCLURE: I have a resolution I would like to introduce at this time. I move sir, that the thanks of this Association be extended to the physicians of Christian county for their unexampled and generous hospitality and entertainment of this Association; further, that our thanks be extended to the newspapers of Hopkinsville, and last, but not least, to Mrs. Woodard and her associates on the Woman's Committee for the delightful time they gave us in this beautiful city. (Applause.)

T. A. FRAZER: I second the resolution.

Carried unanimously by a rising vote. *

As there was no further business to come before the meeting, on motion of the Secretary, the House of Delegates then adjourned *sine die*.

ARTHUR T. MCCORMACK, Secretary.

Sodium Citrate in Physiologic Solution.—Chaston was much impressed by the death of two women, one a few hours after childbirth, the other after hysterectomy for fibromas, both of which had been accompanied by severe hemorrhage. The symptoms indicated that death was due to cardiac thrombosis, the blood having evidently acquired abnormal coagulating properties as a defensive reaction to the repeated hemorrhages. Neither the loss of blood nor surgical shock could be directly incriminated for the fatality. In connection therewith he has been experimenting with sodium citrate, instead of sodium chlorid, in the physiologic salt solution. His results have been encouraging and experiments on the dog have confirmed the harmlessness of intravenous injection of a solution of sodium citrate after much loss of blood. It seems promising, especially after childbirth, when the blood naturally shows increased coagulating power. In these cases it might be well to associate it with a stimulant for the heart. Injected in small doses, and early enough, it might check coagulation in the veins and thus ward off or arrest phlebitis.

ORIGINAL ARTICLES

ACIDOSIS; ITS DETERMINATION, SIGNIFICANCE AND TREATMENT.*

By EMMETT F. HORINE, Louisville.

Acidosis may be defined as a condition in which there is a decreased alkalinity of the blood. The reaction is not changed to any appreciable degree, the condition being rather a neutralization of the bases by large amounts of acid radicles.

It should be remembered that an acid reaction of the blood is incompatible with life and for the prevention of acidity the body has many safeguards. In the first place the chemical composition of the blood, bicarbonates, phosphates, and proteins, is such that a large amount of acid may be added without any noticeable change in reaction. In the second place urea is utilized in the formation of ammonia which neutralizes the acid. The production of ammonia is of double value in that not only an equal amount of acid is neutralized but at the same time the permanent bases are conserved. In the third place large amounts of acids are eliminated by the kidneys and lungs.

The former idea was that acidosis could be determined by examination of the urine. The presence of acetone, of diacetic and beta-oxybutyric acids was considered as indicative of an acidosis. The findings of such substances in the urine merely demonstrates that they are being excreted and *not* that there is any retention of acid radicles in the blood. Therefore examinations of the urine furnish valuable information concerning the excretion of the acetone bodies but no evidence of their accumulation in the blood.

For reliable information we must examine the blood itself, either by direct or indirect methods.

The direct methods for the determination of acidosis are more accurate than the indirect but more difficult of performance and more time consuming. A reduction in bicarbonate content is indicative of acidosis. The usual method is to eliminate the amount of carbon dioxide liberated from the plasma after the addition of an acid. A reduction in the amount of carbon dioxide liberated indicates a reduction in bicarbonate content.

The indirect methods are, under normal conditions, accurate and more easily used in ordinary clinical work than the direct. Haldane's, Frederica's and Marriott's methods which depend upon estimations of the alveolar carbon dioxide as an indirect measure of

the bicarbonate content of the blood, are the ones in general use. My practical experience is limited to the method of Marriott which was recently described (*Journal A. M. A.*, 66: 1594, May 20, 1916), and which I shall demonstrate in a few minutes.

Briefly stated these methods estimate the tension or rather the concentration of carbon dioxide in the alveolar air. In acidosis the tension is diminished because there is less bicarbonate in the blood and more carbon dioxide. This condition results in a stimulation of the respiratory center by the excess of carbon dioxide, then increased pulmonary ventilation with consequent dilution of the alveolar air and decrease in carbon dioxide percentage.

Normally the tension is from 40 to 45 m.m. In mild acidosis the tension is about 30 mm. Tension between ten and twenty indicate a very severe degree of acidosis.

The degree of acidosis may also be roughly estimated by the administration of sodium bicarbonate as advised by Henderson and Palmer. The method is to administer sodium bicarbonate in sufficient amounts to render the urine alkaline or amphoteric in reaction. With normal individuals from five to six grams of sodium bicarbonate are required. In mild acidosis from 20 to 30 grams and in severe acidosis 40 grams or more may be necessary. In fact in extreme cases it may be impossible to neutralize the urine even though 100 grams are given.

Some evidence of the possibility of an acidosis may be obtained by a quantitative estimation of the ammonia in the urine. An increased excretion of ammonia usually points toward an acidosis.

In addition to these methods already outlined I shall mention two others namely the determination of the hydrogenion concentration of the blood and the oxygen-combining power of the hemoglobin. These two tests are very complicated and require considerable experience. Therefore they are unsuitable for ordinary clinical work.

The general symptoms found in acidosis are variable ranging from the mildest ones, mental torpor and irritability to the gravest, coma. Usually there is rapid respiration without cyanosis. A tendency toward drowsiness is noticed and headache is complained of. Later there is nausea and vomiting.

A mild degree of acidosis occurs in many conditions and is without special significance. Acidosis is observed in a greater or lesser degree in the following conditions: diabetes mellitus; fever from any cause; starvation; gastric ulcer; cardiac conditions (dyspnea); nephritis; carcinoma and after general anesthesia.

Acidosis is the usual accompaniment of dia-

*Read before the Muldraugh Hill Medical Society, Hodgenville, September 7, 1916.

betes mellitus and, according to Kussmaul, ended the lives of over sixty per cent. of his cases. It is prone to develop during fasting and, too, without warning. Analyses of the urine may indicate that the percentage of sugar is decreasing yet suddenly hyperpnea, vomiting and coma will develop as evidence of an extreme acidosis. Frequent analyses of the alveolar air will warn one of the onset of dangerous acidosis. Then by proper therapy and a return to a more liberal diet coma can be averted. According to our present knowledge of diabetes it is absolutely essential in the treatment to keep close watch upon the degree of acidosis present. Only when this is done can one hope to handle diabetes with any degree of success.

Acidosis occurring in infectious processes is usually mild and requires no treatment whatever.

According to Peabody in chronic nephritis—"the development of acidosis bears a definite relationship to the functional capacity of the kidney as indicated by the phthalein test." In other words as the excretory power of the kidney is reduced the acidosis increases. Therefore the acidosis of nephritis is due to the retention of acid products and not to an increased formation of these products which occurs in diabetes. Peabody reports a most interesting case of chronic nephritis with uremia in which the alveolar tension was 19.1 mm. Sodium bicarbonate was given intravenously and within a few hours the patient had regained consciousness. The carbon dioxide tension had risen to 41.5 mm. Gradually, though, the tension fell and this time the alkali failed to restore it to its normal limits. The response to the indicated therapy was certainly wonderful even though temporary.

Following general anesthesia there is always more or less acidosis depending upon the anesthetic used, the length of the operative procedure et cetera. Nitrous oxide produces only a very mild acidosis, either a more pronounced and chloroform a still more pronounced condition. Post anesthetic vomiting is in many cases due to acidosis. It is now the practice of many surgeons to administer sodium bicarbonate to all their patients before operation and as soon after the procedure as possible. By this treatment acidosis is practically eliminated and nausea is undoubtedly diminished.

Children are quite prone to acid intoxication. Vomiting and diarrhoea are quite often manifestations of this condition. It is well to bear this fact in mind in handling children and to administer appropriate remedies early.

Knowing the cause of the symptoms in acid intoxication the treatment is clearly indicated. The indications are to neutralize the acid radicales and in this way to prevent the waste

of bases from the body. Sodium bicarbonate is undoubtedly the best alkali to use. Ordinarily this should be administered either by mouth or rectum in a dilution of 1:30. When vomiting or diarrhea is present it is necessary to administer the drug either by hypodermoclysis in a two per cent. solution or intravenously in a four per cent. solution.

In addition to the sodium bicarbonate either glucose or dextrose is of value because of the disturbance of carbohydrate metabolism which occurs in acidosis. The best plan is to dissolve the alkali in a 10 per cent. solution of glucose and administer either by mouth or rectum.

Usually acidosis is a symptom and while it may be itself controlled nevertheless the primary condition may cause a fatal termination. Occasionally acidosis may stand alone as a distinct entity.

Be that as it may we have in the determination of the carbon dioxide tension of the alveolar air a simple and accurate method, under ordinary conditions, for the study of acidosis.

Myxoma-Like Growths in Heart.—In five cases of congenital syphilis in infants referred to by Warthin, round translucent nodules were found in the myocardium, appearing to the naked eye as myxoma-like growths. Three cases were newborn infants dying a few days after birth, one was a child 14 months old, and one a child 18 months old. Of these cases four presented signs of syphilis and showed the presence of spirochetes in other organs and tissues; while one showed syphilis only in the myocardium. The myxoma-like nodules occurred in all cases in the anterior wall of the left ventricle, either near the apex or near the ventricular septum. In one case a similar nodule was found on the posterior wall of the left ventricle. In three cases there were two distinct nodules in the anterior wall of the left ventricle, one just above the apex, the other higher, over the septum. The nodules, which appeared to be nearly round or ovoidal, spherical on section, were all elevated above the general level of the epicardium. The largest were 1 cm. in diameter; the smallest was 5 mm. They extended entirely through the heart wall from epicardium to endocardium, projecting inwardly as well as outwardly on the epicardial surface. In all respects they resembled small myxomas and the first ones seen were at first sight so regarded. The hearts of the five infants were much enlarged, dilated and hypertrophic, the walls of the left ventricle being two or three times thicker than normal. On microscopic examination these round translucent areas were found to consist of an edematous gelatinous connective tissue, showing remains of atropic muscle fibers, especially at the periphery.

EXPECTORANTS: MODE OF ACTION AND SYMPTOMATIC INDICA- TIONS.*

By CARL NORFLEET, Somerset.

Expectorants are drugs which stimulate, depress or modify the secretions from the bronchial or laryngeal membrane and promote its expulsion. There are many drugs not classed as expectorants which under certain conditions may be used to serve one of these purposes. Thus opium and chloral by the depressing influences which they exert upon the respiratory center and the reflex mechanism may relieve reflex and purposeless cough or as is the case with the former drug, check excessive secretion or render it more viscid.

The sedative expectorants: the antimony, *et potas.*, tart, apomorphia, ipecac, *potas. citras.*

The stimulants are; ammonii carbonas, ammonii chloridum, benzoin, tulu, creosotum, eucalyptus, guaiacol, *pix liquida*, scilla, *senega sanguinaris*, terebentum, *terpini hydras* and belladonna

There may be added a third mode of activity, that of assisting expectoration by excitation of the nervous system; as ether, camphor, musk, ammonii carbonas and alcohol.

In whatever way these medicinal substances exert their action on the body, the most important practical part is the division into sedative and stimulant. In the first stages of affection in the bronchi with cough, when there is fever and probably inflammation present, the relaxing expectorants only should be used, either antimony or ipecacuanha; the former may be given with solution of acetate of ammonia, the latter with carbonate of potash; when there is much debility ammonia combined with camphor is generally employed and probably squill added. In chronic cough, with difficult expectoration, the same combination may be used and when there is a relaxed state in the system with copious expectoration and tendency to respiration the acids either vegetable or mineral alone or combined with squill are most serviceable.

As a rule sedative expectorants are permissible only in acute stages of bronchitis when, as is the case in the beginning of all inflammations, there is complete or partial suspension of function, absence of secretion and irritation in the bronchi with distressing, harsh and dry cough.

In these conditions of the respiratory passages the nauseating sedative expectorants serve a useful purpose in lowering arterial tension, lessening the blood supply to the in-

flamed parts and increasing the secretion of mucus.

In sufficiently large doses to produce emesis the same expectorants are frequently employed to expell an accumulation of mucus mechanically by the act of vomiting.

Stimulating expectorants are more serviceable in chronic and relaxed conditions of the mucous membranes. They are usually employed to diminish or disinfect an abnormally increased secretion. These remedies generally increase blood pressure and facilitate expectoration, being eliminated to a great extent by the mucous membranes which they stimulate.

The alkalies are especially useful in lessening the viscosity of mucus, rendering it more fluid, less tenacious and therefore more easily expelled.

We may render the secretions fluid or dry by employing inhalation; there can be no doubt that medicaments can be carried into the bronchial tree and smaller bronchii by this method. For fluidifying the secretion, aqueous vapor or some alkali, sodium bicarbonate, sodium chloride, etc., may be ordered. To reduce the secretions, turpentine, eucalyptus, tar and creosote are very valuable agents, especially creosote with eucalyptus and alcohol as an antiseptic and germicide.

The inhalations should be given every few hours, and when properly applied, they neither fatigue nor irritate the patient.

A number of these agents can be employed to great advantage by inhalation in the treatment of chronic bronchitis, fibrinous bronchitis, bronchorrhea, asthma, pulmonary abscess, pneumonia, tuberculosis, laryngitis, catarrhal and croupous affections. These medicaments can be administered by means of aqueous sprays, oil vapors or steam volatilization.

Ammonium chloride is the most generally used expectorant, it increases the secretions from the gastro-intestinal glands and acts as a cholagogue. The solid constituents of the blood are diminished. The drug appears to have a special action upon the mucous membranes augmenting their normal secretions and promoting changes and epithelial exfoliation.

The indications for the use of these various remedies must be the result of clinical experience alone; but even here contraindications are found. In a number of instances experimental research has shown that some of the drugs are absolutely without value, those, too, which are prized highly by clinicians; it has shown also, others valuable out of proportion to the results of clinical experience, and, again, diametrically opposite conclusions have been arrived at for the same remedy by different experiments. From the clinical point of

*Read before the Kentucky State Medical Association, Hopkinsville, October 24-27, 1916.

view much of the confusion as to choice of this group of drugs is due to their indiscriminate and promiscuous use, but especially to the fact that physicians deem it necessary to prescribe something for everything. The administration of these drugs should be confined to those cases in which it is necessary to give them; under ordinary circumstances a tracheo-bronchitis of the larger tubes is a self-limited disease and runs its course favorably without any intervention. In infants it should always be treated; in the aged or infirm this may also become necessary. Experience has taught me that the expectorants are very untrustworthy, but I should not want to be without them. I feel sure that their use has been greatly abused by the unscrupulous. Various compounds and proprietary mixtures found in our drug houses to-day are being too frequently prescribed by the average practitioner.

In chronic bronchitis the iodides are indicated because of their effects upon the glandular structure and upon adventitious connective tissue. Changes in the glands causes reduction of swelling in the mucous membrane as well as of expectoration; in connective tissue it makes for increase in elasticity of the bronchial wall as well as for increase in secretion. It is not astonishing then that iodides are given both in moist as well as dry forms with excellent results.

In a certain number of cases we find a cough giving rise to symptoms, such as sleeplessness, exhaustion, or pain which demands special relief. In robust adults codeine, when necessary morphine, may be given without hesitation. In infants and the aged great care must be observed in their administration. In children, at least, all other measures should be exhausted before opium is used, as in them as soon as a bronchitis develops there exists the possibility of extension and the production of broncho-pneumonia. As long as the process is confined to the trachea, there can be no possible objection to giving a sedative.

Ipecac is much used as an emetic, being safe, efficient and non-depressant, though slow of action. The syrup of ipecac is frequently used to cut short an attack of spasmodic croup, it may be used beneficially in laryngismus stridulus and in capillary bronchitis. In small doses ipecac is an excellent expectorant.

Apomorphia given hypodermically is a systematic emetic, acting directly on the vomiting center, and is the quickest, most certain and least irritating of all emetics, small doses given by the mouth are expectorant.

The benzoin group are used as stimulating, antiseptic, and disinfectant expectorants, especially in the chronic bronchitis of the

aged, and by atomization in laryngeal affections.

Creosote is an expectorant, astringent, antiseptic, styptic, escharotic, anesthetic and narcotic. Its principle action is upon the heart, respiration and nervous system. Its most general use is in the treatment of pulmonary tuberculosis, its employment in this disease is based on the statement of Guttman, that tubercle bacilli are destroyed by blood which contain one-half per one thousand of creosote, while one-half that proportion arrests their growth. Under the graduated treatment of this disease the cough is relieved, expectoration diminished, night-sweats are stopped, the fever is lowered, while body-weight and appetite are increased in most cases; and in many even the local conditions are decidedly improved, as shown by the physical signs.

The tar preparations are most often given in form of syrups, while they have certain physiological and therapeutic effects, they are chiefly used as vehicles.

Scilla in small doses is an expectorant, as such it serves its purpose better in combination with other agents as ipecac, ammonia, asafoetida, benzoin, etc. It is also used in croup, but is usually combined in this affection with some other emetic, as tartar emetic in the compound syrup, a mixture which may produce very depressing effects and should be used with caution. Larger doses slow the heart, making the pulse slower and stronger, raising arterial tension.

Senega, one of the stimulating expectorants, causes irritation of the throat, an inclination to cough and increases bronchial secretion.

The use of senega is chiefly that of a stimulant, in chronic bronchitis, the second stage of acute bronchitis, typhoid-pneumonia, asthma and croup. It removes the tightness and oppression experienced in the subacute chest affections, relieves cough and rapidly promotes expectoration. It is a powerful depressant of the heart, and of the vascular, nervous, and muscular systems.

Terbennin has been successfully used by many in obstinate winter coughs. It is highly esteemed by others as an inhalant in phthisis, bronchiectasis, chronic bronchitis and other pulmonary affections characterized by profuse purulent expectoration.

Terpin hydrate can be successfully used in most all acute and many chronic affections of the respiratory tract.

In summary, we will find that most all drugs known as expectorants are more or less irritants to the gastro-intestinal tract, therefore it is imperative, in the treatment of most affections of the respiratory passage that great care should be exercised in our prescriptions, that other organs are not injured.

It is my opinion that in the treatment of

diseases of the respiratory tract especially in children, that mistakes are made many times over, by prescribing the various cough mixtures on the market, regardless of possible gastric disturbances.

We should study our cases carefully and conscientiously, and administer to them the drugs most indicated, and adapt the remedy to the case and not adopt the case to the remedy.

THE EXCISION AND IMMEDIATE CLOSURE OPERATION FOR ANO- RECTAL FISTULA.*

By BERNARD ASMAN, Louisville.

Abscesses in the ano-rectal region are quite frequently encountered, and together with their sequelae, viz., fistulae, rectal ulcerations, pruritus ani, fecal incontinence resulting from sphincteric impairment, etc., constitute a large percentage of the total number of cases of ano-rectal disease. With the single exception of the purely traumatic variety, ano-rectal fistula is invariably preceded by or has its origin in an ano-rectal abscess; therefore the importance of a correct appreciation of the latter, especially as to its clinical characteristics, its pathology, and its appropriate treatment, becomes readily apparent.

Ano-rectal abscess differs from abscesses in other situations chiefly because of the anatomy peculiar to the part implicated. The skin of this region being exceedingly thick and tough, not only to a certain degree masks the presence of pus in the deeper structures until tension becomes considerable, but interferes markedly with and delays spontaneous rupture upon the cutaneous surface. The likelihood of serious damage to important muscular tissue, or of the abscess opening into the rectum, is thus considerably increased.

In addition to the inordinately thick skin there is the dense underlying fascia which is closely attached thereto—particularly over the tubera ischii. Contained within the areolar meshwork of this superficial fascia are fat lobules in considerable quantity which are directly continuous with the adipose tissue in the ischio-rectal fossa, there being no distinct separation of deep from superficial fatty tissues by layers of fascia as in other regions of the body. Thus it may be easily understood why the simplest form of subcutaneous abscess, which may be very superficial in the beginning, readily becomes a deep abscess; and because of the fibrous septa between the lobules of fat, as the pus burrows, tortuous channels in various directions are created. Obviously, then, it is of the utmost import-

ance that ano-rectal abscess be recognized in its early stages, that adequate steps may be undertaken to limit and minimize its ravages.

The space between the ischium and the rectum, known as the ischio-rectal fossa, contains a quantity of fatty tissue which it is believed serves as a compressible pad permitting distension of the rectum prior to and during defecation. This space is pyramidal in shape, is practically surrounded with fascia, and when distended with pus an exit is forced in the direction of least resistance.

The levator ani muscle, which has its origin from the anterior and lateral aspects of the pelvic wall, is a wide muscular plane which extends and is attached to the rectum, constituting what has been designated as the pelvic diaphragm. Its lower surface is lined with the thin layer of the pelvic fascia. In the performance of surgical operations in this region, care should be exercised to preserve the integrity of this muscle, that the retention as well as the expulsive power of the rectum may not be impaired.

Suppuration, which is usually circumscribed, occurs in the ano-rectal region with surprising frequency, but this fact may be readily understood when the many existing etiological factors are taken into account. Any one of several conditions favoring the entrance and lodgment of pyogenic micro-organisms, either locally or through the blood stream, may be considered a predisposing factor in the formation of an abscess. Among the lesions most commonly encountered may be mentioned, anal fissure, ulceration upon the sphincter muscle or inside the rectum, ulcerated internal or external hemorrhoids, stricture either syphilitic or cancerous, injuries from foreign bodies, such as sharp pieces of bone, etc.

The particular pus-producing organism or organisms active in production of the individual abscess, is also a matter of importance when considering the proper line of treatment to be instituted. Contentions frequently made during the last decade or two, that all ano-rectal abscesses are caused by the tubercle bacillus, have been effectually disproved particularly by the investigations of Quenu and Hartman. While it was determined that the tubercle bacillus, either alone or in conjunction with other pyogenic organisms, plays an important part in the causation of a large percentage of these abscesses, yet in over forty per cent. of all ano-rectal abscesses it is entirely absent. Of twelve examples of abscess in the ano-rectal region, selected as being representative cases, and in which careful culture experiments were made, they report that in seven cases the tubercle bacillus was clearly demonstrated. Of these seven, tubercle ba-

*Read before the Kentucky State Medical Association, Hopkinsville, October 24-27, 1916.

cilli were found alone in two, in four they were associated with the colon bacilli, and in one with streptococci and staphylococci. In the remaining five cases no tubercle bacilli were discovered, the staphylococcus together with the colon bacillus in one, and the colon bacillus alone in the other two cases. From this it would appear that the organisms usually responsible are: the bacillus coli communis, the tubercle bacillus, the streptococcus pyogenes, and the staphylococcus pyogenes aureus and albus. Whether or not an abscess results, when any one or more of these organisms find lodgment in the tissues, either through a local lesion or the blood stream, depends upon the local and constitutional vitality or resisting power of the individual, influenced to a certain extent perhaps by treatment.

The varieties of ano-rectal abscess may be conveniently divided into: (a) subcutaneous, (b) ischio-rectal, (c) pelvi-rectal, and (d) submucous. In addition might be mentioned those resulting from stricture of the urethra, or diseases of the prostate gland. This division is of advantage in studying the sequelæ of these abscesses, particularly the various forms of fistulæ.

Since pus always burrows in the direction of least resistance, it will be readily understood that even although treatment of an abscess in the subcutaneous tissue be neglected, it will almost certainly rupture upon the cutaneous surface; and in the event a fistula follows, it will be simple, of the blind external variety, and easily cured.

An ischio-rectal abscess, however, being located beneath the deep fascia, unless artificially opened will quite likely rupture into the rectum between the internal and external sphincter muscles, there also occurring about the same time (or later) an opening upon the cutaneous surface, thus resulting in either a blind internal or a complete fistula.

A pelvi-rectal abscess, occupying the space between the upper surface of the levator ani muscle and the rectum, if not artificially opened will rupture into the rectum just above the insertion of the levator ani muscle, or the pus will gradually burrow between the fibres of the levator and invade the ischio-rectal fossa.

A submucous abscess occurs between the mucous and muscular coats of the rectum, frequently several inches above the internal sphincter muscle, and practically always ruptures into the rectum. Rupture may occur at the point of development, or the pus may burrow downward near the anal margin before penetrating the rectal wall. The sinus resulting from an unhealed submucous abscess may be quite long, and is of much importance as a probable factor in the etiology of

anal pruritus. A contracted but unobliterated abscess cavity constitutes a fistula.

The treatment of ano-rectal abscesses has as its chief object the prevention of fistula. Free evacuation of the pus is the primary requisite, and this should be accomplished before destruction of important tissues and structures has supervened, i.e., so soon as pus, no matter how small in quantity, is demonstrably present. Oftentimes individual procrastination is responsible for the resulting fistula, the patient waiting until the abscess is "pointing" or perhaps has already ruptured upon the cutaneous surface or into the rectum, before applying for surgical treatment. Again, as relief from pain not infrequently accrues from rupture of the abscess, many patients believe no surgical attention is thereafter required. Equally injurious is the small puncture or so-called "stab wound" sometimes employed in opening such abscesses.

First, then, it is important that the abscess be opened so soon as possible after its formation, i.e., just as soon as pus is present. Second, and equally important, is the character of the incision to be employed. A single linear incision, no matter how long nor how deep, will rarely suffice for the provision of thorough drainage. As the cavity naturally contracts after the pus is liberated, the edges of the incision coming together are likely to adhere. Union thus ensues before the cavity becomes filled with granulation tissue, the abscess re-forms with further burrowing of the pus, and rupture finally occurs or another opening is made necessary. This can be avoided by employing a crucial or "T" shaped incision. If the most prominent part of the abscess is sufficiently far from the anal verge, the crucial incision is to be preferred, each cut extending entirely through the inflammatory zone. If the abscess closely approaches the anal verge, the "T" shaped incision may be utilized, the horizontal arm of the "T" being made parallel with the side of the anus, the other extending outward at right angles thereto. The septa are then carefully divided, and if the abscess be not of recent origin, it should be carefully curetted and thoroughly irrigated. Any overlapping skin, particularly at the angles, should be trimmed away.

About three hours after opening the abscess, the patient should be placed in a hot bath for ten or fifteen minutes, and this should be repeated daily until granulations are well established. The dressing for the first several days, depending largely upon the size of the cavity, should consist of hot boric acid fomentations. Once a day the wound should be carefully cleaned with twenty-five to fifty per cent solution of hydrogen peroxide; and after granulations begin to appear balsam of Peru

and castor oil in the proportion of one to eight may be advantageously employed.

In ordinary abscesses the patient need not be kept in bed longer than two or three days. Should the healing process become sluggish, stimulation of the wound surface with nitrate of silver or compound tincture of benzoin is indicated. The bowels should be kept open, and a valuable aid in the accomplishment of this without purgation is injection into the rectum of an ounce of olive oil each night, continued so long as may seem advisable or necessary.

An abscess treated in this way will in nearly every instance promptly heal, and thus there is prevented the establishment of a fistula. The writer would, however, urgently insist upon the employment of the method of opening the abscess as described, for unless perfect drainage be secured and consistently maintained during the healing process, i.e., until the cavity is entirely filled with granulation tissue beginning at the bottom of the wound, a fistula will surely follow. The character of the fistula and the extent of involvement will depend upon the time of opening the abscess, and the degree of success accomplished in maintaining correct drainage while healing is taking place.

When for any reason healing from the bottom is not secured, a fistula is the inevitable result, since fistula in this region according to the ordinary acceptance of the term, signifies simply a contracted but unobliterated abscess cavity plus chronicity.

The usual methods of dealing with fistula surgically comprise (a) incision with trimming away of the diseased tissue lining the tract, and packing the wound, (b) careful excision of the diseased tissue lining and surrounding the tract, together with all existing branches, and immediate closure of the wound by suture. It is the latter method to which the writer desires to call special attention. The advantages of the operation are obvious, and if attained will lessen the necessary period of convalescence very much. If the fistulous involvement is extensive, weeks of post-operative treatment are saved the patient. If the sphincters are implicated and have to be severed in the operation continence is assured by this method, whereas by the old open operation in complicated cases it is doubtful of attainment.

Although, as stated by Sir Charles Ball, of Dublin, sporadic attempts to close fistula wounds by suture had hitherto been recorded, it was an American surgeon, Dr. Stephen Smith, who first in 1886, drew special attention to this subject. Little more was heard of it until about 1900, when Dr. Frederick Lange reported a number of cases successfully

treated by excision and enthusiastically recommended the operation.

Only in more recent years has this method of treatment been seriously considered and practiced, the chief objections having been, as stated by Gant: (a) it is more difficult and requires a longer time to perform, (b) considerable hemorrhage, (c) primary union is not always obtained because of infection. The operation is described by him as follows: "The entire sinus is laid open in a manner similar to that in the operation of complete division. All of the old fistulous tract is then carefully dissected out, and the edges of the wound perfectly adjusted with catgut sutures, and a dry dressing applied. If the operation is a success there will be very little need of after-dressings, since the wound heals in a few days by primary union."

One does not wonder that he (Gant) uses the phrase "if the operation is a success," but rather the wonder is that such a procedure could ever be followed in any other than the simplest superficial fistulae. On the other hand, if the excision and immediate suture operation is undertaken only after the patient has been carefully and specially prepared; if due regard to surgical cleanliness is observed during the operation; if steps are taken effectively to prevent post-operative infection from the rectum, and if the after-treatment as regards dressing, etc., is carefully applied, a successful outcome may be confidently expected in the great majority of suitable cases.

The preparation of the patient must be exact, and cannot be dismissed with the general order of "a purgative the night before and an enema the morning of the operation." It is, of course, essential that the patient's rectum, and especially the colon, be thoroughly empty. This is best accomplished by administering an effective purgative thirty-six hours prior to the time of operation, a soapsuds enema twelve hours before, and another three hours before the appointed time. The peri-anal region must be thoroughly scrubbed and shaved. The fistulous tract should be cleansed daily for a week or more with peroxide of hydrogen.

When the patient is on the operating table and anesthetized, the rectum should again be thoroughly washed with soap and water, dried, and carefully packed above the operative area with gauze; the skin surface of the region painted with iodine. The sinus may then be injected with carbolic acid, immediately followed by alcohol. After the insertion of a flexible probe, an incision through the skin is made to encircle the external opening, and is continued in a line corresponding in direction to the underlying tract, finally encircling the internal opening. This incision is then continued into the deeper tissues until

the indurated wall of the fistulous tract is reached; this is then dissected away from the healthy surrounding tissue, care being observed not to cut into the sinus; the fistula is thus brought away in toto threaded as it were upon the probe.

The wound is then carefully examined, any branch sinuses or diseased areas removed, hemorrhage controlled, and closure of the wound begun. This is best accomplished by first passing two or more silkworm-gut sutures beginning one-half inch or more from the skin margin on one side of the incision, going entirely beneath the wound and emerging a similar distance from the skin margin on the opposite side. The damaged or severed muscular structures and fascia are then brought together with interrupted catgut sutures, employing as many separate layers as may be required according to the depth of the wound, especial attention being given to the sphincter and levator ani. Sufficient mucous membrane is loosened to furnish a flap which is sutured over the anal end of the incision, to help guard against infection of the wound from the rectum. The skin is closed and the silkworm-gut sutures tied.

As a further aid in guarding against infection from the rectum, the writer employs a hard rubber spool-like tube, funnel-shaped at its upper extremity, and so constructed that its convex surface rests smoothly over the upper surface of the sphincter when it is held *in situ* by gauze placed between the peri-anal tissues and the other flange of the tube. This permits the transmission of practically all germ-laden mucous and other rectal contents into the outer dressing without coming in contact with the sutured wound; the latter also having been carefully painted with collodion, then covered with gauze which is held in place by overlapping strips of adhesive plaster extending from around and beneath the outer flange of the tube to beyond the outer limits of the suture line.

The patient should, of course, be kept on a light diet. Defecation need not be permitted for six days or more, since the well open tube allows the escape of all gas as it forms in the intestinal canal. The outer pad into which is passed the discharges from the tube, should be changed frequently enough that the inner dressing may not become moist. The adhesive plaster should be daily inspected, and if it continues absolutely dry, may be allowed to remain about a week. Upon its removal the wound should appear much like a clean abdominal wound when the first dressing is taken off.

The writer desires to repeat that this method of operation is not to be recommended in all cases of ano-rectal fistula, but in selected

cases, especially in those where incontinence, complete or partial, would likely follow the open operation, it is well worthy of a trial.

Bacillema in Tuberculosis Shown by Post-mortem Clots from Heart.—Wilson examined blood clots from the heart in a case of generalized miliary tuberculosis in which the dissemination was extreme and the tubercle relatively young. The patient, a woman of 52 years of age, became ill about Oct. 21, 1914, with a feeling of unusual fatigue, fever and slight chilly sensations, increasing toxemia, rapidly progressing anemia, weakness and dyspnea, without any signs of localized disease. Death took place on November 29. (Many lesions of tubercle bacilli were found at the necropsy.) The white clots and blood found in the right side of the heart were fixed in mercuric chlorid, carefully washed, and embedded in paraffin. The sections were floated on warm carbolfuchsin without removal of the paraffin, decolorized, and counterstained with methylene blue, washed, dried on the slide, the paraffin removed by warming and the use of xylene, and the sections mounted in balsam. These stained sections were then carefully searched for tubercle bacilli. Only four typical slender and beaded acid-fast bacilli were found in the blood clot sections. Sections of the tuberculous lesions in the organs stained in the same manner showed the presence of similar acid-fast bacilli in enormous numbers in the focal necroses. If the other nine-tenths of the heart blood and clot not examined contained tubercle bacilli in the same proportion as the one-tenth examined, then the entire number contained in the heart blood at time of death would be forty or less. In this case, as the disease was in a most acute and severe form and the organisms were being generalized throughout the body in large numbers, the number of bacilli found in the blood at any given moment would have to be relatively small, and the chances for demonstrating their presence by stained smears, cultures, or animal inoculation could not be very favorable. In milder cases, and in cases of chronic pulmonary tuberculosis, Wilson says, the chances for such a diagnostic demonstration of the bacilli in the circulating blood would seem to be very small indeed.

Is Bacillus Abortus Pathogenic for Human Beings?—Cooledge says he has no proof that bacillus abortus (Bang) is pathogenic for human beings, although it is possible to cause antibodies for bacillus abortus to appear in the blood serum of adults by feeding a milk which is naturally infected with bacillus abortus and which contains the bacillus abortus antibodies. Antibodies appearing as above apparently indicate a passive immunity due to the absorption in the large intestine of the antibodies present in an infected milk.

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NEXT MEETING STATE ASSOCIATION.
ASHLAND, 1917

COUNTY SOCIETY REPORTS

Hardin—The regular meeting of the Hardin County Medical Society was held on October 12th in Elizabethtown at the office of Dr. Mobley, with the following members present: Drs. Layman, O'Connor, Mobley, Aud, Strickler, Carroll, Rock, Gray, Reesor, English, McClure, Rogers, Allen, Alvey.

This was the largest attendance and one of the most interesting meetings we have had during the year.

The meeting was called to order by the president of the society, Dr. Allen. The minutes of the previous meeting were read and approved.

J. W. O'Connor reported a case of appendicitis, the patient was a girl 12 years of age. The case was in a serious condition when seen and thought to be too far advanced for operative procedure. The child had a temperature ranging from 101 to 103 and was suffering with very severe pains in the bowels and other symptoms of appendicitis and peritonitis.

The treatment given by Dr. O'Connor was morphine to relieve the pain and to paralyze the peristaltic action of the bowels, upon this treatment the patient rapidly improved and at the time of reporting the case, the temperature was normal and the pulse above normal.

A great deal of interest was taken in this case and it was thoroughly discussed by Drs. Aud, Strickler, Carroll, English, Rogers, Allen, McClure, and Layman.

Charles McClure in discussing the case stated that in his practice and experience with appendicitis he had lost two cases, and in these two cases he did not use medicines to clean out the bowels and in all other cases that he had treated he used medicines to clean out the bowels, all of which recovered, which is contrary to the teaching of most surgeons.

J. M. English in discussing the case stated that he did not think that castor oil would do any harm if given after morphine had been given to put the peristaltic action of the bowels at rest, the oil would gravitate through and have a tendency to remove any impaction that may be present without increasing the danger of rupture.

J. V. Prewitt reported a case of mashed hand in which two fingers were mashed off. The case was referred to Dr. Prewitt after first aid treatment had been given. The results of the first aid treatment were not good and gangrene and sloughing of the flap followed. Dr. Prewitt especially recommended the skin graft treatment in cases of this kind after sloughing process had cleared away as this treatment would lessen the deformity and shorten the duration of recovery. This case was discussed by Drs. Strickler, O'Connor, and Aud, with particular stress being laid on having plenty of flap in such cases.

J. M. English reported a case of confinement, multipara, age 42. Dr. English was called in this

case in the absence of the physician that had been engaged. He found the patient's body covered with hemorrhagic spots and bleeding from membrane of the mouth and spitting blood. There had been bleeding from the womb several days before delivery. The child was delivered and in a short time afterwards a gush of blood from the womb followed, which could not be controlled, repeated doses of ergot were given hypodermically and other means to control hemorrhage applied without effect, the mother died in about forty-eight hours.

This case created an unusual discussion which was taken part in by most all members present. Drs. Aud and O'Connor had a very heated argument over the use of abdominal bandage after confinement. Dr. Aud favored it and Dr. O'Connor thought it useless.

J. C. Mobley also reported a case of confinement; the patient was 44 years of age and was a sister of the above case reported by Dr. English. In this case the child could not be delivered without being turned and delivered feet first, the head was delivered with forceps after considerable trouble in applying them. The mother died in a few days and it was thought by Dr. Mobley and Dr. O'Connor who was with him, that the cause of death was thrombosis.

Time being up the meeting was adjourned.

W. F. ALVEY, Secretary.

Warren—The regular meeting of the Warren County Medical Society was held November 8th. In the absence of the President and Vice President, J. M. Adair of Claypool was called to the chair.

E. N. Hall reported several interesting cases.

J. M. Adair exhibited a case of infantile paralysis of child age three in September, had a slight cold and fever three days after onset of illness. There was a marked stiffness in the legs, and the right leg was entirely paralyzed. Since that time the paralysis has been gradually improving.

There being no further business the society adjourned to meet in December.

W. P. DRAKE, Secretary.

Warren—At the call of the President, a very largely attended meeting of the Warren County Medical Society was held at the Chamber of Commerce.

The President stated that the purpose of the meeting was to hear a report of the committee on the establishment of a city and county hospital. The committee reported that several joint meetings had been held with the Committee on Sanitation of the Chamber of Commerce, and that after full and free discussion, it had been determined that it was the best policy to submit the entire matter to the Chamber of Commerce and be guided by it as to the exact methods of procedure. Each of the members present discussed the

proposition, that we organize for the purpose of securing a new hospital, and, upon the conclusion of the discussion, it was moved and unanimously adopted that our committee be discharged, and that the representative of the profession on the Council of the Chamber of Commerce be requested to report to it; that the Warren County Medical Society fully realized the urgent necessity for a city and county hospital; that it pledged its best endeavors as an organization to securing one, and that every physician in Warren county, individually and collectively, agreed to support the Chamber of Commerce in any movement it might set on foot for securing a good hospital, and in doing all the other things which so powerful an organization could do for the betterment of Warren county. It was urged that it be made clear that a hospital was needed far more for the use of the people, than the benefit of the physician. Many of our sick and afflicted people are unable to get the treatment their conditions demand at home, and the establishment of an efficient, modern hospital is essential for such care as will render them efficient citizens of our community.

W. P. DRAKE, Secretary.

Changes in Cervical Sympathetic Ganglia.—

This investigation is based on a study in fixed tissue of the pathologic changes in cervical sympathetic ganglia removed at operation from sixteen patients with hyperplastic toxic goiter. It appears that definite histologic changes do occur in the cervical sympathetic ganglia in hyperplastic toxic (exophthalmic) goiter. These histologic changes consist in various stages of degeneration, namely: (a) hyperchromatization, (b) hyperpigmentation, (c) chromatolysis and (d) atrophy, or (e) granular degeneration of the nerve cells. All of these are but successive steps in degeneration, which, if uninterrupted, proceed to the complete destruction of the ganglion cells affected. Not all of the ganglion cells in any of the ganglia examined were so completely destroyed as to render improbable their return to normal under favorable conditions. There is some evidence that in ganglia from cases clinically improved some of the cells have partially or wholly recovered. Some of the ganglia contain cells resembling the partially differentiated cells in the ganglia of infants. Accompanying the more advanced changes in the ganglion cells are similar degenerative changes in the nerve fibres, and an increase of connective tissue throughout the ganglion, but especially in the outer and middle coats of the vessels, and in the periganglionic tissue. In general, the pathologic changes in the cervical sympathetic ganglia are parallel to the stage and intensity of the symptoms of hyperthyroidism, and to the hyperplastic and regressive changes in the thyroid.

NEWS ITEMS AND COMMENTS

A large number of Paducah doctors attended the semi-annual meeting of the Southwestern Kentucky Medical Association at Clinton,, October 31. It was a one-day session and a good program had been prepared by Dr. E. W. Jackson, the secretary. The doctors were entertained by the Hickman County Medical Society and the citizens.

The program was as follows:

Morning Session.

Meeting in General Session—Dr. E. B. Willingham, presiding.

Invocation—Rev. J. M. Jenkins.

Address of Welcome—Hon. L. L. Hindman.

Response for the Association—Dr. G. W. Payne, Bardwell.

Reports of Committees.

Announcements.

Scientific Program.

The Care of Infants and Children—Dr. Chas. Hunt, Clinton.

Twilight Sleep, Report of Cases—Dr. G. L. Thompson, Lovelaceville.

Observations of Clinical Congress of Surgeon and Convocation of American College of Surgeons—Dr. W. F. Grinstead, Cairo, Ill.

Afternoon Session.

Empyema—Dr. H. T. Rivers, Paducah.

Puerperal Eclampsia—Dr. L. L. Washburn, Benton.

Lateral Curvature of the Spine—Dr. B. A. Washburn, Paducah.

Placenta Previa—Dr. H. A. Shelby, Mayfield.

Trachoma and Its Surgical Treatment—Dr. M. W. Rozzell, Hopkinsville.

Dr. John G. Tye had a narrow escape from death when his automobile turned over with him and pinned him to the ground. The machine left the road and landed about seventy feet down an embankment, holding him fast until help could come to him. He got a mule and rode into town and informed Walter T. Cody of the whereabouts of his Ford. Cody after hearing how badly the Ford was battered up took the necessary repairs, and in three hours he had "Miss Ford" back in town and the Doctor was ready for another episode.

The regular monthly meeting of the Bourbon County Medical Society was held in the county court room at the court house, October 27, at 8 o'clock, following a dinner given at the Windsor Hotel. Dr. Louis Ransohoff, of Cincinnati, made an address on "Congenital Stenosis of the Pylorus," followed by a general discussion by the members of the local society and others from surrounding cities. Drs. Barrow, Bullock, Van-

Meter, Estill and Vance, of Lexington were in attendance.

Dr. C. W. Lester, a leading physician of Todd county, died recently at Guthrie. He was fifty-nine years of age.

Dr. F. S. Clark and family, of Louisville, have moved to Cloverport to reside. They moved into the English property on railroad street. Dr. Clark will practice medicine there.

Calling out a cheerful greeting to his wife, as he strode through the house when he went home, Dr. Clarence A. Rogers walked into the backyard of his home at Cordova, and raising a pistol to his right temple sent a single bullet crashing through his brain.

A negro houseboy, who was in the yard, looked up just as Dr. Rogers raised the pistol and saw the physician shoot himself and fall dead instantly.

The pistol shot and the cry of the negro were heard by Mrs. Rogers, but before she could reach her husband he had gasped his last.

Dr. Rogers was a graduate of a Memphis medical college and attended Vanderbilt University, where he took a post-graduate course.

The Clark County Medical Society met with Drs. Bush and Snowden, in the Colonial building. Some matters of special importance in regard to the operating room in the new hospital were discussed. Mr. J. H. Crone, the architect, and Mr. N. A. Powell, contractor were present to consult with the physicians in regard to light, and etc., for the operating room.

This was the last meeting of the society before the State meeting at Hopkinsville, new members paying their dues at this time, were allowed membership for the remainder of the year of 1917.

The Henry County Board of Health won in its efforts to compel vaccination as a condition of attending the common schools when Chief Justice Milled dissolved an injunction granted Principal B. F. Hill, of the Bethlehem school, enjoining the Board from further prosecuting him for failure to enforce the order.

The eighty-third quarterly session of the Kentucky Midland Medical Society was held in Lexington at the Phoenix hotel with an attendance of about fifty of the physicians and surgeons of the Bluegrass section.

The meeting was devoted largely to the consideration of infantile paralysis, a paper by Dr. R. J. Estill, of this city, being presented and generally discussed, followed by a paper by Dr. W. B. Owen, of Louisville, on the treatment of deformities following the disease.

Dr. J. L. Toll, of Lawrenceburg, presented a

paper on the "Symptoms and Diagnosis of Dysentery," being followed by Dr. W. H. Coffman, of Georgetown, who presented a paper on the treatment of dysentery. Both papers were discussed at some length.

The meeting adjourned at noon for luncheon at the Phoenix hotel when the visiting doctors were entertained by the Lexington physicians. The doctors spent the afternoon at the trots.

The next meeting of the association will be held at Versailles in January. Dr. L. T. Minniss is president and Dr. W. S. Wyatt, secretary.

Dr. Henry E. Tuley, of Louisville, was elected secretary of the Mississippi Valley Medical Association at the closing session in Indianapolis.

Dr. J. F. Bunton, a prominent physician and surgeon for the I. C. at Fredonia, was the victim of an accident in which he sustained painful injuries when he fell from a ladder.

The eighty-third quarterly session of the Kentucky Midland Medical Society, with about fifty physicians of the Bluegrass in attendance, was held at the Phoenix hotel October 14, 1916. Discussion was confined chiefly to infantile paralysis. Papers were presented by Dr. R. J. Estill, of this city; Dr. W. B. Owen, of Louisville, who spoke on the treatment of deformities following the disease; Dr. J. L. Toll, of Lawrenceburg. The next meeting will be held at Versailles in January.

A recent investigation made by the U. S. Public Health Service in connection with studies of rural school children showed that 49.3 per cent had defective teeth, 21.1 per cent. had two or more missing teeth, and only 16.9 per cent had had dental attention. Over 14 per cent never used a tooth brush, 58.2 per cent used one occasionally and only 27.4 per cent used one daily. Defective teeth reduce physical efficiency. Dirty, suppurating snaggle-toothed mouths are responsible for many cases of heart disease, rheumatism, and other chronic affections. The children are not responsible for the neglected state of their teeth. The ignorant and careless parent is to blame for this condition—a condition which hampers mental and physical growth and puts a permanent handicap on our future citizens. School teachers can and are doing much in inculcating habits of personal cleanliness on the rural school child but this will fail of the highest accomplishment unless parents co-operate heartily and continuously. This is a duty which we owe our children.

As a precaution against winter typhoid the Chattanooga department of health has issued an order that all screens be kept up until Nov. 1. In consequence health inspectors have been notified to arrest all grocers, butchers, bakers and

other dealers in food products who fail to observe the city ordinance requiring such places to be screened. Several reports were made that screens were being removed at meat shops and groceries.

Dr. I. A. Shirley, of the State Board of Health was in Carlisle to confer with the county board relative to the existence of scarlet fever and diphtheria in the county. There are four cases of diphtheria and fifteen cases of scarlet fever reported.

Dr. J. M. Dennis died at the home of his son, in the county, aged 83 years. He was for many years a Confederate veteran. He had been an invalid from paralysis several years. He is survived by his wife and four children—Will, Medley and Morton Dennis and Miss Lalla Dennis.

The health authorities of Nicholas county issued a proclamation asking the people to lend them all possible assistance in suppressing the threatened epidemic of scarlet fever and diphtheria in the county, a number of cases of which is reported. A strict quarantine of all homes where cases of the disease are found is being maintained, and it is hoped that further spread of the disease may be prevented.

The first district school, of Mayfield, was closed on account of two cases of diphtheria which are in the neighborhood of the school. The order was issued by the Board of Education. More than 100 pupils will be vaccinated.

Dr. S. L. Helm, first assistant at the Eastern State Hospital, was elected superintendent of the Institute for the Feeble-minded by the State Board of Control.

Method of Minimizing Pain of Labor.—The method used by Kostmayer is as follows: As soon as the pain of the first stage becomes definitely annoying, chloral is given in 10-grain dose and repeated in forty-five to sixty minutes, as indicated, as much as three doses being given, if necessary. When the character of the pain changes to the "bearing down" of the second stage, 1-8 grain of morphin is given as soon as this pain is severe enough to warrant it. It is rarely necessary to repeat the morphin, though this may safely be done after an hour or two. If labor is retarded in the least, or if in the judgment of the physician labor might safely be hastened, pituitary extract is given in graduated doses. As the presenting part begins to dilate the vaginal orifice, ether is given by the open-drop method at the beginning of each pain, and continued until the pain subsides.

THE FORUM

TO THE EDITOR:

The Hopkinsville meeting was such a delightful one, that I hesitate to strike a discordant note. There is however one feature which I feel needs a passing notice.

On entering the beautiful church auditorium, one found the walls plastered with "anti-spitting" notices, and down each aisle there was a row of newly bought cuspidors, silent monitors of the anticipated uncleanly habits of the "State's Sanitarians." The wisdom of this precaution on the part, probably of the ladies of the church, was amply justified by later incidents, which I take no pleasure in detailing.

During the sessions, the writer sat near doctors, who doubtless in their boyhood days were "crack shots" at spitting at a crack in the floor, at a nickle at "hit-spit," but who were ignominious failures when it came to "centering" the spit-box, with the amber juice expressed from the luscious quid rolled between toothless gums, behind tobacco soiled lips. During the delivery of the splendid address on Wednesday afternoon, the atmosphere was so surcharged with tobacco smoke, that Dr. Bloodgood the speaker-guest, was frequently interrupted by coughing, materially interfering with the delivery of his message. At night, when the same speaker addressed the society, when the ladies were present and there was no smoking, he did not cough or clear his throat a single time.

The turning down of the lights for the use of the lantern slides, seemed to be the signal for the smokers to "light-up," and was continuously practiced during the meeting. In calling attention to this, I am sure that I voice the sentiments of hundreds of doctors in Kentucky.

When we go up to Ashland next year, whether the sessions be held in one of the beautiful churches or in a "barn" this notice should stand on the walls, "THE USE OF TOBACCO POSITIVELY PROHIBITED IN THIS ROOM. THE CHAIRMAN WILL SEE THAT THIS RULE IS ENFORCED." If this is done, there will be no necessity for "anti-spitting" notices, or "new-bought cuspidors."

Submitted, "with leave to amend."

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BOOK REVIEWS

The Medical Clinics of Chicago—Vol. 2, No. 2, (Sept. 1916). Philadelphia, W. B. Saunders Co., 1916. Bi-Monthly. Price per year; paper \$8.00, cloth \$12.00.

The latest selection from the clinics held recently in Chicago contains a list of cases that are of interest not only to the general practitioner and diagnostician, but to the specialist in nearly every line. Next to being present at the actual examination of the patient, the study of these cases and the remarks of the clinician comes next in value. There are also some generalizations which are of sufficient importance to bear repetition. Williamson calls attention to the fact that in typhoid the pulse is slow relative to the degree of fever present, probably one of the most important differential points in the diagnosis of that disease. He also refers to the diagnostic value of the multilobulated character of the liver in syphilis of that organ. Tice's case of tumor of the head of the pancreas is especially interesting in view of the attention now being paid to that organ. Zeisler sums up the result of cavine treatment of acne as being very disappointing; he insists that acne has a multiplicity of etiological factors, not a single one. In view of the difficulty of definitely diagnosing syphilis of the stomach and intestines Portis' clinic on syphilis of the stomach is most interesting. Mix makes the suggestion that commercial benzene be used in the treatment of leukemia in place of the refined; he reports a symptomatic cure in one patient so treated. Beifeld discusses the diagnostic significance of a large number of normoblasts and megoblasts, with the former predominating; this condition is found in pernicious anemia only during the "blood-crises"; if found constantly it points to a chronic myelogenous leukemia, a Von Jaksch pseudo-leukemic anemia of infants, or a carcinomatosis of the bone-marrow.

S. A. S.

Bacteriologic Aspect of Abderhalden Test.—

Analyzing the results of the work done by Rivas and Buckley it would seem as if the ferment claimed by Abderhalden to be present in the serum of pregnant woman, if present at all, has no appreciable power of digesting placental tissue. the irregularity and the unreliability of the test in the hands of others is due to technical errors; the more exact the technic becomes, the greater the number of negative results obtained, and the more evidence of the fallacy of the test.

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VOL XIV.

BOWLING GREEN, KY., JANUARY 1, 1916

No. 1

CONTENTS AND DIGEST

EDITORIALS.

THE CONFERENCE OF CITY AND COUNTY HEALTH	1
THE NEW YEAR	1
OFFICERS	1
DOPE DISPENSING DOCTOR	2
MALARIA	2
ENTERMATE THE RATS	2
PATENT MEDICINES	3
DR. U. L. TAYLOR	3
THE LAW ABOUT SORE EYES IN BABIES.....	5
ILL EFFECTS OF OUTDOOR SLEEPING	5
A MEDICAL DICTIONARY	6
MAY WE COUNT ON YOUR ASSISTANCE.....	6

SCIENTIFIC EDITORIAL.

FUSS AND FEATHERS IN ANESTHESIA, by W. H. Long	6
--	---

ORIGINAL ARTICLES.

A STUDY OF THE SECRETIONS OF THE MAMMAE; A FACTOR IN THE CAUSE OF ECLAMPSIA. TREATMENT OF ECLAMPSIA, by W. E. Gary, Louisville	7
NITROUS-OXIDE-OXYGEN ANESTHESIA, by W. H. Long, Louisville	14
DISCUSSION by Edward Speidel and in closing by the essayist.	

(Continued on page xi.)

JUST OUT—JANUARY NUMBER

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VOL XIV.

BOWLING GREEN, KY., FEBRUARY 1, 1916

No. 2

CONTENTS AND DIGEST

EDITORIAL.

THE ALL-TIME HEALTH OFFICER BILL.....	57
A BILL TO PREVENT BUYING AND SELLING OF PATIENTS BY PHYSICIANS	57
OPTOMETRY	57
POISONOUS PAPER	57
DO YOU WANT SOMETHING?.....	58
DEFINITE DEAD CERTIFICATES	58
UNITED WE STAND DIVIDED WE FALL.....	58

OFFICIAL ANNOUNCEMENTS.

A BILL TO PREVENT DIVISION OF FEES	59
--	----

ORIGINAL ARTICLES.

DIGITALIS, ITS INDICATIONS AND USE, by W. W. Anderson, Newport	30
DISCUSSION by F. C. Askenstedt.	
INTENSIVE TREATMENT OF SYPHILIS, by I. N. Bloom, Louisville	63
DISCUSSION by A. T. McCormack, Curran Pope, J. W. Kincaid, and in closing by the essayist.	
HEART COMPLICATIONS IN ACUTE INFECTIOUS DIS- EASES, by A. L. Thompson, Madisonville.....	69

(Continued on page xi.)

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BOWLING GREEN, KY., MARCH 1, 1916

No. 3

CONTENTS AND DIGEST

EDITORIAL

AN APPRECIATION OF MR. KOHN	105
THE ALL-TIME HEALTH OFFICERS BILL	105
A SUGGESTION	106
MALARIA	106
AMERICAN FIRST AID CONFERENCE	106

SCIENTIFIC EDITORIAL

WHAT DETERMINES MALIGNANCY IN EPITHELIOMAS, by M. L. Ravitch, and S. A. Steinberg ..	107
ORGANOTHERAPY, by E. W. Jackson	108

ORIGINAL ARTICLES.

INTUSSUSCEPTION IN INFANTS, by Lewis S. McMurtry, Louisville	110
FRACTURES. (Illustrated), by John B. Murphy, Chicago, Ill	113
DIFFICULT PRESENTATIONS, (Illustrated), by Edward Speidel, Louisville	135
VERMONTANUM WITH REFERENCE TO REFERRED SYMPTOMS. (Illustrated), by Geo. H. Day, Louisville	143

(Continued on page xi.)

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VOL XIV.

BOWLING GREEN, KY., APRIL 1, 1916

No. 4

CONTENTS AND DIGEST

EDITORIALS.

THE VITAL STATISTICS FOR 1915	169
YOUR DUES	170
DENTRI MALTOSE	170
DR. TANEYHILL	170
DR. W. L. ROEMAN	171
DR. VANCE	171
DOPE DISPENSING	172
PROPRIETARY MEDICINES	172
SEND FOR CONTAINERS	173
BIRTH REGISTRATION	173
WHY I DO NOT ATTEND SOCIETY MEETINGS.....	175

SCIENTIFIC EDITORIALS.

PHYSIO-THERAPY IN SKIN DISEASES AND SYPHILIS, by M. L. Ravitch and S. A. Steinberg.....	176
---	-----

OFFICIAL ANNOUNCEMENTS.

VITAL STATISTICS REPORT, 1915	178
-------------------------------------	-----

ORIGINAL ARTICLES.

PERFORATION OF GASTRIC AND DUODENAL ULCERS by Irvin Abell, Louisville	180
ENDOMETRITIS IN THE VIRGIN, by J. O. Jenkins, Newport	182

(Continued on page xi.)

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VOL XIV.

BOWLING GREEN, KY., MAY 1, 1916

No. 5

CONTENTS AND DIGEST

EDITORIALS.

OUR NEW LEGISLATION	235
WHAT WE OWE TO DR. MILTON BOARD	236
THE RESIGNATION OF PROFESSOR R. M. ALLEN..	236

SCIENTIFIC EDITORIALS.

DANDRUFF AND FALLING OUT OF THE HAIR, by M. L. Ravitch and S. A. Steinberg	237
---	-----

OFFICIAL ANNOUNCEMENTS.

NO MALPRACTICE SUITS AFTER ONE YEAR	239
SEVERE PENALTIES FOR FEE-SPLITTING	239
NEW MODEL ADVERTISING LAW.....	239
THE NEW PURE FOOD LAW	239

ORIGINAL ARTICLES.

THE MODERN MEDICAL AND SURGICAL TREATMENT OF TUBERCULOSIS, by Everett Morris, Oak For- rest, Ill	242
PURITY IN THE LIFE AND LANGUAGE OF THE PHY- SICIAN, by J. W. Crenshaw, Cadiz.....	244
HEMOPHILIA. REPORT OF CASE, by Henry M. Rubel, Louisville	246
DISCUSSION by J. J. Moren, W. C. Dugan, Virgil H. Simpson, J. Rowan Morrison, A. W. Nickell G. W. Kelly, Jr. C. G. Forsee, Bernard Asman,	

(Continued on page xi.)

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No. 6

CONTENTS AND DIGEST

EDITORIAL.

THE PROGRAM.....	291
ABOUT THE DISCORD STILL EXISTING IN SOME COUNTY SOCIETIES	291
THE ANNUAL A. M. A. MEETING.....	294
MEDICAL AUTHORITIES AND VIBURNUM PRUNI- FOLIUM	294
DR. N. R. SIMMONS	295

SCIENTIFIC EDITORIALS.

RAYNAUD'S DISEASE AND SYPHILIS, by M. L. Ra- vitch and S. A. Steinberg, ...	295
--	-----

OFFICIAL ANNOUNCEMENTS.

KENTUCKY STATE MEDICAL ASSOCIATION PRE- LIMINARY PROGRAM	297
---	-----

ORIGINAL ARTICLES.

A GENERAL PLAN FOR A SCHEDULE OF MEDICAL FEES, by J. N. McCormack, Bowling Green....	298
COMPLICATIONS AND SEQUELLA OF INFLUENZA, by T. J. Marshall, Bardwell	309
TREATMENT OF INFLUENZA, by W. Z. Jackson,, Arlington	310
BREAST TUMORS, by J. B. Lukins, Louisville.....	311

(Continued on page xi.)

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CONTENTS AND DIGEST

EDITORIAL.

KENTUCKY'S ADVANCED LEGISLATION	355
THE CARDUI TRIAL	356

SCIENTIFIC EDITORIAL.

RADIOGRAPHY AND RADIOTHERAPY	357
UNPREPAREDNESS	358

ORIGINAL ARTICLES.

UREMIA, by H. K. Orsborn, Owensboro	359
ABDOMINAL PAIN, by Oscar E. Bloch, Louisville..	361
SOME OF THE USES AND ABUSES OF THE OBSTET- RIC FORCEPS, by I. J. Hoover, Owensboro,.....	363

REPORT OF CARCINOMATA OF THE BREAST WITH A METASTASIS TO LIVER AND PRESENTATION OF SPECIMEN, by Fritz C. Askenstedt, Louisville...	365
SOME CARDIO-VASCULAR STIMULANTS AND THEIR USES, by Fritz C. Askenstedt, Louisville	366
ANURIA, by J. M. Morris, Louisville	373
THE MANAGEMENT OF NORMAL LABOR, by Nevil M. GARRETT, Frankfort	374
PYORRHEA AND ITS RELATION TO SYSTEMIC DIS- TURBANCES, by B. P. Rivers, Jr., Louisville	378
REMOTE INFECTIONS WHICH HAVE THEIR ORIGIN IN THE MOUTH, by R. Hays Davis, Louisville...	380

(Continued on page xl.)

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VOL XIV. BOWLING GREEN, KY., AUGUST 1, 1916 No. 8

CONTENTS AND DIGEST

EDITORIAL.

THE HOPKINSVILLE MEETING	401
COUNTY MEMBERS FALLING DOWN	401
ANNOYING LABORATORY EXPERIENCES	401
DR. STUART EXGNORATED	402
A MANUAL FOR HEALTH OFFICERS	402
INFANTILE PARALYSIS	403

SCIENTIFIC EDITORIALS.

THE 1916 MEETING OF THE A. M. A.	405
DERMATOLOGY AND SYPHILIS AT THE DETROIT SESSION	406

ORIGINAL ARTICLES.

THE AFTER EFFECTS OF DIPHTHERIA ON THE EYE, EAR, NOSE AND THROAT, by Gaylord C. Hall, Louisville	407
MODERN TREATMENT OF DIPHTHERIA, by J. I. Greenwell, New Haven	412
SYMPOSIUM ON GLAUCOMA	
PATHOLOGY OF GLAUCOMA, by W. D. Levi, Louis- ville	414
MEDICAL TREATMENT OF GLAUCOMA, by I. A. Led- erman, Louisville	416

(Continued on page xi.)

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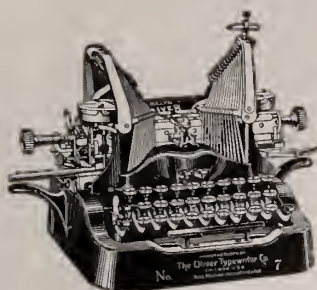
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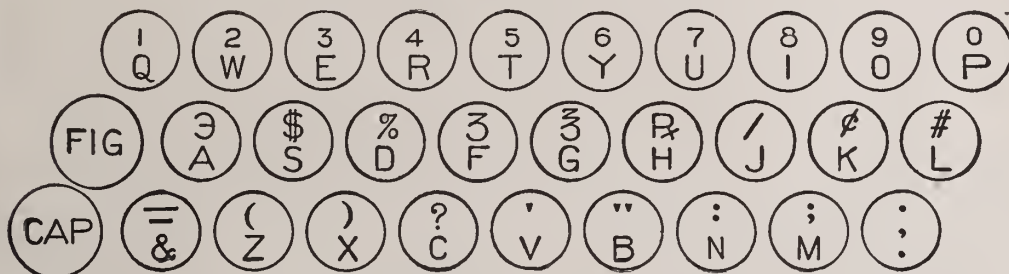
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No. 9

CONTENTS AND DIGEST

EDITORIAL.

ANNUAL MEETING	447
RAIL ROAD RATES FOR THE HOPKINSVILLE MEETING	447
BUSINESS	448
THE DISCUSSIONS	448
OUR ADVERTISERS	448
THE COMMERCIAL EXHIBIT	449
THE CARDUI TRIAL	449
DR. J. H. LACKEY	450
THE ARMY REJECTIONS	451

SCIENTIFIC EDITORIALS.

BACTERIA AND PYURIA IN SKIN DISEASES, by M. L. Ravitch and S. J. Sternburg	451
--	-----

OFFICIAL ANNOUNCEMENTS.

PROGRAM OF GENERAL MEETING OF KENTUCKY STATE MEDICAL ASSOCIATION	453
OFFICIAL CALL	454
CONSTITUTION AND BY-LAWS	456
REPORT OF COUNCIL	462

(Continued on page xi.)

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No. 11

CONTENTS AND DIGEST

EDITORIAL.

AT HOPKINSVILLE	557
OUR STATE OFFICERS	557
DR. JOHN B. MURPHY	558

SCIENTIFIC EDITORIALS.

SPIDER BITES, by M. L. Ravitch and S. J. Steinh- berg, Louisville	559
--	-----

ORATION IN MEDICINE.

The Future of the Medical Profession in Kentucky. by E. A. Stevens, Mayfield	560
---	-----

ORATION IN SURGERY.

THEN AND NOW IN SURGERY, by W. L. Gambill, Jenkins	564
---	-----

ORIGINAL ARTICLES.

NON-TUBERCULOUS INFECTIONS OF THE KIDNEY, by Claude G. Hoffman, Louisville	568
DISCUSSION by Herbert Bronner and in closing by the essayist.	
ABRAHAM LINCOLN (Illustrated), by Curran Pope, Louisville	572
(Continued on page xi.)	

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HOPKINSVILLE NUMBER

KENTUCKY MEDICAL JOURNAL



Being the Journal of the Kentucky State Medical Association

Published Semi-Monthly under Supervision of the Council

Editorial and Business Office, Corner State and Twelfth Streets.

Subscription Price, \$2.00

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No. 10

CONTENTS AND DIGEST

EDITORIAL

TO HOPKINSVILLE	509
FORTY YEARS AGO	509
DR. VERNON ROBINS	510
DR. VON EZDORF	510

OFFICIAL ANNOUNCEMENTS.

PROGRAM OF THE GENERAL MEETING OF THE KENTUCKY STATE MEDICAL ASSOCIATION	510
CHRISTIAN COUNTY AND HOPKINSVILLE	511
MINUTES OF PROCEEDINGS TWENTY-FIRST ANNUAL SESSION, HELD AT HOPKINSVILLE, APRIL, 1876	513

COMMERCIAL EXHIBIT	525
EIGHTH ANNUAL REPORT OF THE MEDICO-LEGAL COMMITTEE	526

ORIGINAL ARTICLES.

LESSONS AND OBSERVATIONS OF THE MEDICO-LEGAL COMMITTEE, By J. J. Moren, Louisville..	527
THE DOCTOR CONSIDERED AS A BUSINESS MAN, By George Cowan, Danville	533

(Continued on page xi.)

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VOL XIV. BOWLING GREEN, KY., DECEMBER 1, 1916 No. 12

CONTENTS AND DIGEST

EDITORIAL.		SCIENTIFIC EDITORIALS.	
PROCEEDINGS OF SCIENTIFIC SESSION AND HOUSE OF DELEGATES, ...	605	TREATMENT OF DERMATOSES DUE TO NEPHRITIS, by M. L. Rayitch and S. A. Steinburg	607
COUNTY OFFICERS, ...	605	OFFICIAL ANNOUNCEMENTS.	
INDEX	605	KENTUCKY STATE MEDICAL ASSOCIATION.—OFFICIAL MINUTES OF THE SIXTY-SIXTH ANNUAL MEETING HELD AT HOPKINSVILLE, OCTOBER, 25, 26, AND 27, 1916	
DETAIL MEN	605	INVOCATION	
READ ALL OF THE JOURNAL	606	(Continued on page xi.)	
CARRAL'S SOLUTION	606		
DR. CHARLES H. TODD	606		
AN INNOVATION	607		
BREEDING FLIES	607		

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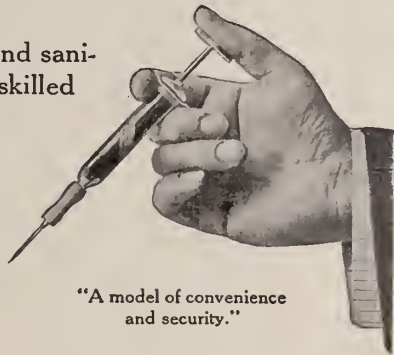
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